# New San Diego Central Courthouse-Traffic Impact Analysis Report

### Prepared for

#### **Administrative Office of the Courts**

Prepared by



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#### **EXECUTIVE SUMMARY**

The Administrative Office of the Courts (the "AOC") has proposed construction of a New San Diego Central Courthouse in the downtown area of the City of San Diego (the "City"). This study analyzes the forecast traffic impact of the proposed courthouse project. The proposed location is bound by B Street to the north, C Street to the south, State Street to the east, and Union Street to the west. An office building and a pay parking lot currently occupy the site.

The proposed project will include 71 courtrooms. Of the 71 courtrooms, 59 will be relocated from the existing courthouse immediately east of the proposed project site. Ten of the 71 courtrooms will be relocated from the Madge Bradley and Family Law Courthouse several blocks east of the proposed site. One courtroom will be relocated from Kearney Mesa and one new courtroom will be added. Sixty of the 71 court rooms will provide for jury trials, and the remaining courtrooms will serve probate, family court, and small claims and will not have a jury call. Only two of the courtrooms, the new courtroom and the relocated courtroom from Kearney Mesa, will generate new trips into downtown.

Construction of the new building will displace one existing office building and a public parking lot (181 spaces). The AOC will also demolish the County Courthouse and Old Jail, which provide space for County of San Diego employees and employees supporting detention operations in the Old Jail. The removal of these buildings will reduce the traffic, parking demand, and parking supply in the study area. The AOC has no current plans to redevelop the existing County Courthouse site. The Madge Bradley and Family Law Courthouse will provide office space for other tenants.

The proposed project will generate approximately 134 new trips per day. Another 721 trips per day will redistribute through downtown to account for the relocation of the Madge Bradley and Family Law courthouses. Combined, the redistribution of trips and the new trips will generate approximately 385 new trips during the a.m. peak period.

In addition to evaluating traffic operating conditions, this report also discusses the project's parking demands. The proposed courthouse will provide approximately 60 onsite underground spaces for judges and key courthouse staff. All others will be required to park off site in the existing surface parking lots, public parking structures or on the street. In addition to the existing offsite demand, a total of 370 parking spaces will be needed to serve the new courthouse.

This study analyzed the traffic operating conditions for the following intersections and roadway segments:

#### **Study Intersections**

Ash Street / Union Street
 Ash Street / Front Street
 C Street / State Street
 B Street / Union Street

#### Study Roadway Segments

Ash Street: Columbia Street to State Street

State Street to Union Street
Union Street to Front Street
Front Street to First Avenue

A Street: Columbia Street to State Street

State Street to Union Street Union Street to Front Street Front Street to First Avenue

B Street: Columbia Street to State Street

State Street to Union Street
Union Street to Front Street

C Street: Columbia Street to State Street
 Broadway: Kettner Boulevard to India Street

Union Street to Front Street Front Street to First Avenue

State Street: Ash Street to A Street

B Street to C Street

C Street to Broadway

Front Street: Ash Street to A Street

A Street to B Street

• First Avenue: Ash Street to A Street

A Street to B Street

This traffic impact study was prepared in accordance with the City of San Diego Traffic Impact Study Manual (2003). The City's goal for acceptable levels of service is LOS D or better at signalized intersections and along roadway segments. Existing a.m. peak hour and daily roadway segment traffic volume was collected specifically for this study in April 2010. Operational analysis shows all intersections and roadway segments operate at LOS D or better.

Project-generated trips calculated were based on rates established for similar facilities, categorized into jury and non-jury trials. Trips were then to the roadway network, and added to the existing a.m. peak hour and daily volumes to determine the short-term project impacts. The addition of the forecast project-generated trips to the existing conditions does not change the LOS from acceptable to deficient at the study intersection or along study roadway segments. Therefore, there are not forecast significant impacts for the study intersections and segments under Existing Plus Project conditions.

The AOC forecasts that the project will open in the year 2016. To evaluate traffic operations for the project opening year, a growth rate factor of two percent per year was applied to all existing conditions traffic volumes. The growth factor is based on existing ADT volumes and forecast year 2030 ADT volumes reported in the Downtown Community Plan Update. This report evaluates cumulative condition with and without the proposed project.

Based on City of San Diego significant impact thresholds, no direct project impacts are identified for Existing or Cumulative conditions. Therefore, no mitigation is required.

The project will provide approximately 60 on-site parking spaces for judges and key court staff. All other vehicles will park off-site in public parking lots. An inventory of available public surface parking lots found 874 parking spaces within a three block radius of the project site. A field occupancy survey conducted in March 2010 revealed that at 8:30 a.m., when the peak demand for parking for the courts would be occur, approximately 45% of the total surface parking spaces were unoccupied. The project will need 370 parking spaces to accommodate the forecast a.m. peak period traffic forecast. Clearly this demand could be met by the surface parking spaces alone, with 395 parking spaces available at 8:30 a.m. However, there are over 1,700 public parking spaces available in parking structures near the project site. Therefore, there is sufficient parking within the three block radius to meet the a.m. peak parking demands of the courthouse.

The construction of the new courthouse will result in the removal of a 181 public parking lot. The project will also reduce the demand for parking with the removal of the office buildings that exist on this site and other uses that will be removed with the demolition of the existing courthouse (Old Jail and San Diego County office space). According to the trip generation analysis, the removal trips associated with the demolition of the existing courthouse and the demolition of the existing office buildings on the proposed site will result in a decline in parking demand by as much as 326 vehicles. Therefore, the removal of the parking lot will not negatively impact the parking supply in the project vicinity.

#### INTRODUCTION

The Administrative Office of the Courts (the "AOC") has proposed a New San Diego Central Courthouse project in downtown San Diego. This study analyzes the forecast traffic impacts of the proposed courthouse project in downtown San Diego. The project site is adjacent to B Street to the north, C Street to the south, State Street to the east, and Union Street to the west. An office building and a pay parking lot currently exist on the site. Exhibit 1 and Exhibit 2 illustrate the regional vicinity map and the study area map of the project.

Analysts prepared this traffic impact study in accordance with the SANTEC/ITE Traffic Study Guidelines and City of San Diego (the "City") Traffic Impact Study Manual (2003). The City's goal for acceptable levels of service ("LOS") is LOS D or better at signalized intersections and along roadway segments.

This report evaluates the a.m. peak hour intersection and daily roadway segment operations for existing and Year 2016 conditions with and without the proposed project.

#### PROJECT DESCRIPTION

The proposed project will include 71 courtrooms:

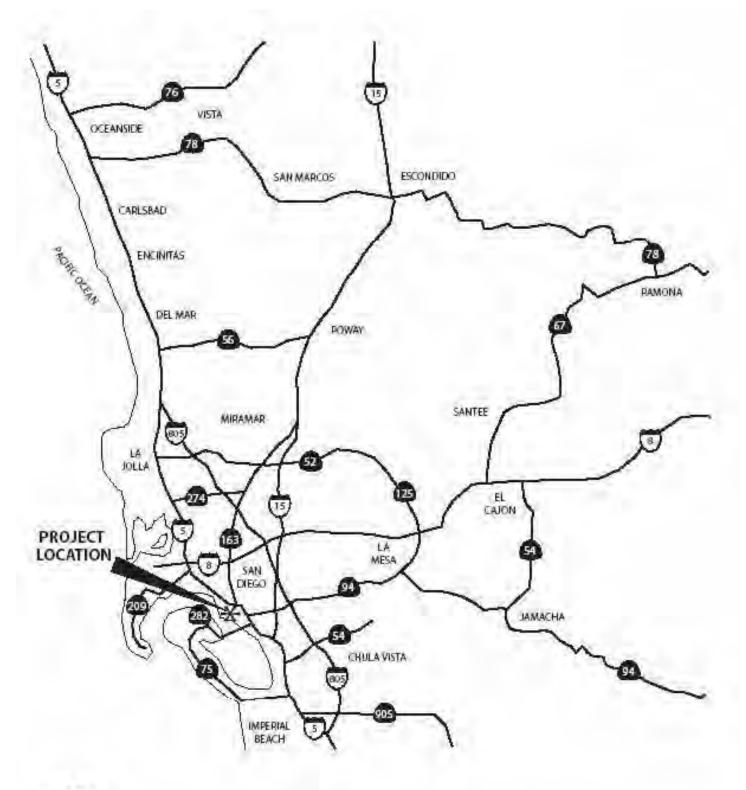
- 59 courtrooms will relocate from existing County Courthouse building, which is adjacent to the proposed courthouse site;
- 10 courtrooms will relocate from Madge Bradley & Family Law Courthouse; 1 court room will relocate from Kearney Mesa; and
- 1 new courtroom will be added.

Of the total 71 courtrooms, only the new courtroom and relocated courtroom from Kearney Mesa will generate new trips into downtown San Diego.

Once the new courthouse is constructed, the Administrative Offices of the Courts (AOC) intends to demolish the existing building. At the time this report was prepared, the AOC had no plans to redevelop the existing County Courthouse and Old Jail sites. The demolition of the existing Courthouse and the existing buildings on the proposed site will result in a reduction in trips within the study area:

 Construction of the new courthouse will displace one existing office building and a public parking lot (181 spaces). The removal of this building will reduce the parking demand and the total trips within the study area.

- Staff of the County of San Diego (the "County") occupy approximately 56,000 BGSF of the existing County Courthouse. These staff will move to a new location when the AOC prepares to demolish the existing courthouse.
- The Old Jail, located within the existing courthouse, will demolished and will not be replaced within downtown.

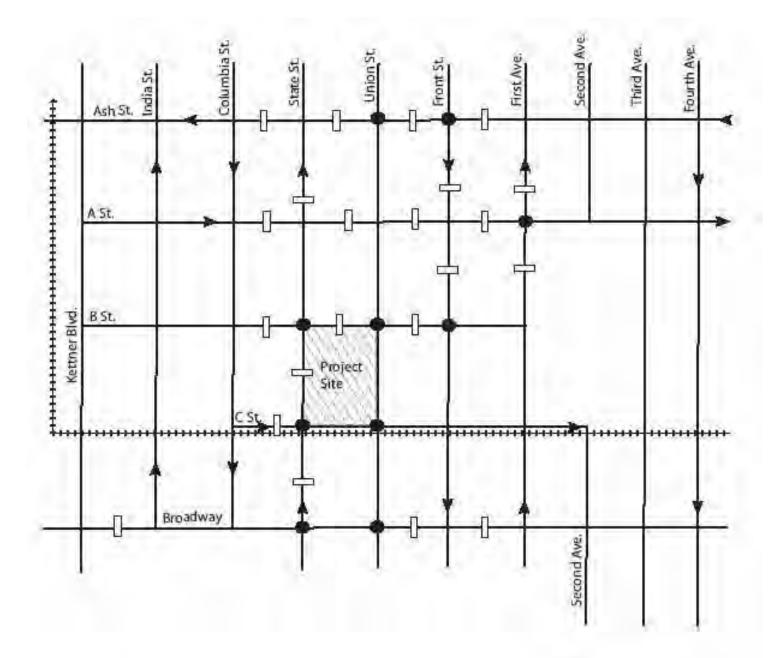






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REGIONAL PROJECT VICINITY





Study Intersection
Study Roadway Segment
One-way
Project Sile

STUDY AREA

#### STUDY AREA

The project study area is based on the distribution of project-generated trips on the roadway network. The list of study intersections and roadway segments is based on recommendations by City staff and City of San Diego Traffic Impact Study Manual. The traffic study includes all signalized intersections where the project will add 50 or more peak hour project-generated trips. Exhibit 2 shows study intersections and roadway segments.

Based on these thresholds, the study area consists of the following intersections:

- Ash Street / Union Street
- Ash Street / Front Street
- First Avenue / A Street
- B Street / State Street
- B Street / Union Street

- B Street / Front Street
- C Street / State Street
- C Street / Union Street
- Broadway / State Street
- Broadway / Union Street

#### **ANALYSIS METHODOLOGY**

In accordance with the City of San Diego Traffic Impact Study Manual, this study analyzes the followings study scenarios:

- **Existing Conditions** Analysis of existing traffic count volumes, intersection geometry and existing roadway network.
- **Existing Plus Project Conditions** Analysis of existing traffic volumes overlaid with the forecast project-generated traffic. The existing intersection geometry and roadway network were used in this analysis.
- Existing Plus Cumulative Conditions (No Project) Analysis of existing traffic volumes overlaid with traffic associated with approved or pending projects anticipated to be constructed by the project-opening year.
- Existing Plus Cumulative Plus Project Conditions Analysis of existing traffic volumes overlaid with cumulative project traffic and traffic generated by the proposed project.

This study uses the 2000 Highway Capacity Manual methodology for Signalized Intersections to determine the operating Levels of Service (LOS) of the study intersections. The Highway Capacity Manual (HCM) methodology describes the operation of an intersection using a range of levels of service (LOS) from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on corresponding average stopped delay per vehicle shown in Table 1.

**Table 1: Intersection LOS & Delay Ranges** 

LOS	Delay (seconds/vehicle)			
LOS	Signalized Intersections	Unsignalized Intersections		
Α	<u>&lt;</u> 10.0	<u>&lt;</u> 10.0		
В	> 10.0 to <u>&lt;</u> 20.0	> 10.0 to < 15.0		
С	> 20.0 to <u>&lt;</u> 35.0	> 15.0 to < 25.0		
D	> 35.0 to <u>&lt;</u> 55.0	> 25.0 to ≤ 35.0		
E	> 55.0 to <u>&lt;</u> 80.0	> 35.0 to ≤ 50.0		
F	> 80.0	> 50.0		

Source: 2000 Highway Capacity Manual.

The roadway segment analysis of the study area roadways is based upon roadway classifications and capacity thresholds defined in the City of San Diego Traffic Impact Study Manual. The roadway segment level of service criteria is included in Table 2.

**Table 2: Level of Service Thresholds for Roadway Segments** 

Classification (# Lanes)		Level of Service				
		Α	В	С	D	Е
Primary Arterial (6)		25,000	35,000	50,000	55,000	60,000
Major Artarial	Two-way (6)	20,000	28,000	40,000	45,000	50,000
Major Arterial	One-way (3)	10,000	14,000	20,000	22,500	25,000
Major Artorial	Two-way (4)	15,000	21,000	30,000	35,000	40,000
Major Arterial	One-way (2)	7,500	10,500	15,000	17,500	20,000
	Two-way (2)	2,500	3,500	5,000	6,500	8,000
Local	One-way (3)	4,000	5,500	7,500	9,000	10,000
	One-way (2)	2,500	3,500	5,000	6,500	8,000
	Two-way (4)	10,000	14,000	20,000	25,000	30,000
Collector	One-way (3)	7,500	10,500	15,000	18,750	22,500
	One-way (2)	5,000	7,000	10,000	13,000	15,000
Collector (no center lane (4)) (continuous left-turn lane 2))		5,000	7,000	10,000	13,000	15,000
Collector (2) (no fronting property)		4,000	5,500	7,500	9,000	10,000
Collector (2) (commercial-industry		2,500	3,500	5,000	6,500	8,000

Source: City of San Diego Traffic Impact Study Manual

The City's goal for acceptable operating conditions is LOS D or better for intersections and roadway segments. The City's Traffic Impact Study Manual identifies thresholds of significance shown in Table 3:

Table 3: City of San Diego Level of Significance Thresholds

_	Allowable Change Due To Project Impact					
LOS with Project	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (sec.)
E (or ramp meter delays above 15 min.)	0.010	1.0	0.02	1	2.0	2.0
F (or ramp meter delays above 15 min.)	0.005	0.5	0.01	1	2.0	1.0

Source: City of San Diego Traffic Impact Study Manual

#### **EXISTING CONDITIONS**

#### **Existing Roadway Circulation System**

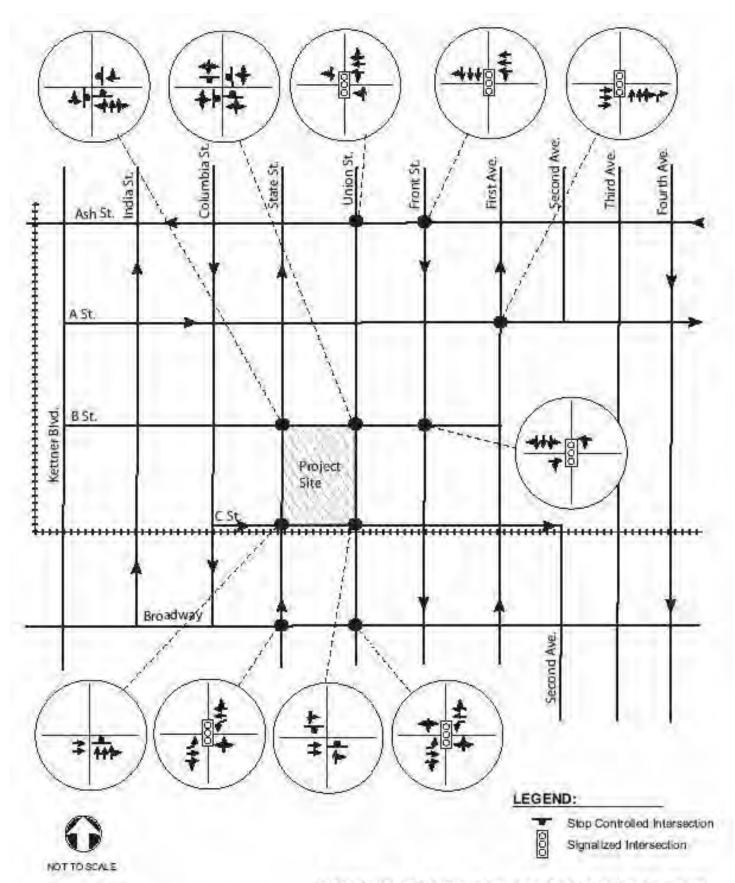
A thorough field investigation of the existing roadway and intersection conditions was conducted specifically for this project. This analysis included traffic signal operations, lanes, parking and other factors that may affect the capacity of the roadway. A description of all existing roadways is provided below. Exhibit 3 shows existing intersection geometry and traffic signal control.

**Ash Street** is a one-way westbound street providing three travel lanes. Ash Street is a one-way Major Street within the study area. Metered curbside parking is generally provided on both sides of the street.

A Street is a one-way eastbound street providing three travel lanes. A Street is a one-way Major Street within the study area. Metered curbside parking is generally provided on both sides of the street.

**B** Street is a two-lane street oriented in an east-west direction. B Street is a two-lane Local Street within the study area. Metered curbside parking is generally provided on both sides of the street.

**C Street** is a one-way eastbound street providing two travel lanes. Trolley tracks runs in between each eastbound travel lane. C Street is classified as a two-lane Local Street within the study area. No curbside parking is provided along C Street.





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**EXISTING INTERSECTION GEOMETRY** 

**Broadway** is a four-lane divided road oriented in an east-west direction. Broadway is as a Collector Street within the study area. Most intersections through the study area have restricted left turn access from Broadway onto side streets. Metered curbside parking is generally provided on both sides of the street.

**Kettner Boulevard** is a one-way southbound street from Ash Street to A Street providing two travel lanes and is considered a Major Street within the study area. From A Street to Broadway, Kettner Boulevard is a two-lane Major Street within the study area. Metered curbside parking is generally provided on both sides of the street.

**State Street** is a one-way northbound street providing three travel lanes. State Street is a one-way Local Street within the study area. Metered curbside parking is generally provided on both sides of the street.

**Union Street** is a two-lane street oriented in a north-south direction. Union Street is a two-lane Local Street within the study area. Metered curbside parking is generally provided on both sides of the street.

**Front Street** is a one-way southbound street providing three travel lanes. Front Street is a one-way Major Street within the study area. Metered curbside parking is generally provided on both sides of the street.

**First Avenue** is a one-way northbound street providing three travel lanes. First Avenue is a one-way Major Street within the study area. Metered curbside parking is generally provided on both sides of the street.

#### **Existing Conditions Levels of Service**

To determine the existing operation of the study intersections, intersection movement counts were collected on a typical weekday during the a.m. (7:30 to 9:30 a.m.) peak period. Since the courts typically end judicial proceedings prior to the p.m. peak period, there is no analysis for this time period. Average daily traffic volumes were also collected over a 24-hour period.

Exhibit 4 shows existing a.m. peak hour and daily traffic volumes. Detailed count data is in Appendix A. Table 4 shows the results of the existing conditions a.m. peak hour intersection operating conditions. Detailed Highway Capacity Manual (HCM) calculation sheets are in Appendix B. As shown in Table 4, all intersections are currently operating at an acceptable LOS (LOS D or better) during the a.m. peak hours.

Roadway segment levels of service calculations were conducted based on established capacity thresholds defined by roadway classification and average daily traffic volumes. Table 5 presents the results of the existing conditions roadway segment level of service

analysis. As shown in Table 5, all of the roadway segments operate at acceptable levels of service.

Table 4: Existing Condition Intersection LOS – AM Peak

Study Intersection	Control	Delay -	LOS
Ash Street / Union Street	S	6.2	Α
Ash Street / Front Street	S	19.9	В
First Avenue / A Street	S	17.2	В
B Street / State Street	U	9.3	Α
B Street / Union Street	U	10.3	В
B Street / Front Street	S	6.1	Α
C Street / State Street	U	10.9	В
C Street / Union Street	U	10.5	В
Broadway / State Street	S	0.0	Α
Broadway / Union Street	S	8.5	Α

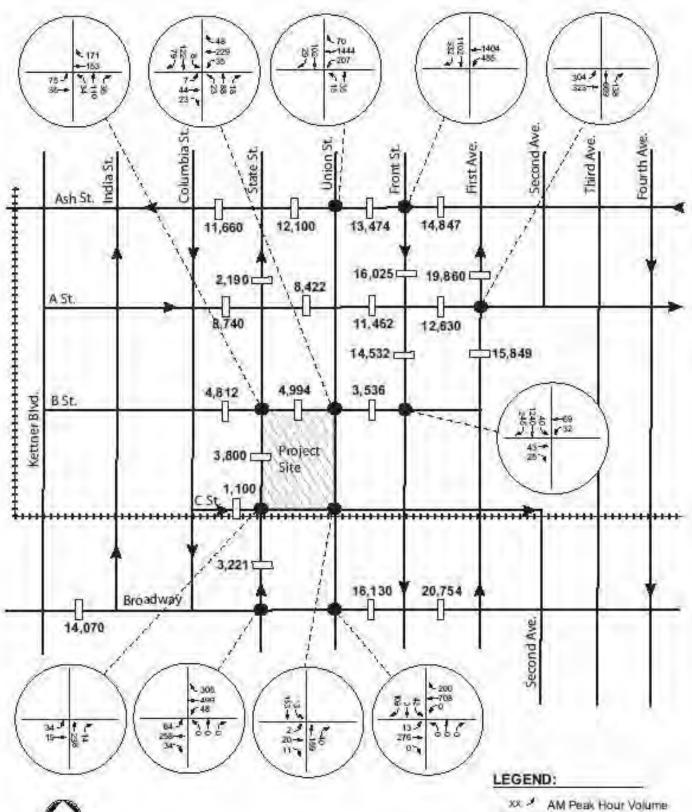
Note: Deficient intersection operation shown in **bold**.

Control: S= signalized , U= unsignalized

**Table 5: Existing Conditions Roadway Segment LOS** 

		Class	LOS E	Existing		
Roadway	Location	(# Lanes)	Capacity	ADT	V/C	LOS
	Columbia Street to State St.	Major one-way (3)	25,000	11,660	0.47	В
Ash	State Street to Union Street	Major one-way (3)	25,000	12,100	0.48	В
Street	Union Street to Front Street	Major one-way (3)	25,000	13,474	0.54	В
	Front Street to First Avenue	Major one-way (3)	25,000	14,847	0.59	С
	Columbia Street to State St.	Major one-way (3)	25,000	8,740	0.35	Α
A Street	State Street to Union Street	Major one-way (3)	25,000	8,422	0.34	Α
A Sileei	Union Street to Front Street	Major one-way (3)	25,000	11,462	0.46	В
	Front Street to First Avenue	Major one-way (3)	25,000	12,630	0.51	В
	Columbia Street to State St.	Local (2)	8,000	4,812	0.60	С
B Street	State Street to Union Street	Local (2)	8,000	4,994	0.62	С
	Union Street to Front Street	Local (2)	8,000	3,536	0.44	С
C Street	Columbia Street to State St.	Local one-way (2)	8,000	1,100	0.14	Α
	Kettner Blvd. to India Street	Collector (4)	30,000	14,070	0.47	С
Broadway	Union Street to Front Street	Collector (4)	30,000	16,130	0.54	С
	Front Street to First Avenue	Collector (4)	30,000	20,754	0.69	D
State	Ash Street to A Street	Local one-way (3)	10,000	2,190	0.22	Α
Street	B Street to C Street	Local one-way (3)	10,000	3,800	0.38	Α
Olicci	C Street to Broadway	Local one-way (3)	10,000	3,221	0.32	Α
Front	Ash Street to A Street	Major one-way (3)	25,000	16,025	0.64	С
Street	A Street to B Street	Major one-way (3)	25,000	14,532	0.58	С
1 <sup>st</sup>	Ash Street to A Street	Major one-way (3)	25,000	19,860	0.79	С
Avenue	A Street to B Street	Major one-way (3)	25,000	15,849	0.63	С

Note: Deficient roadway segment operation shown in bold.





XX AM Peak Hour Volume X,XXX Average Daily Traffic



**EXISTING CONDITIONS TRAFFIC VOLUMES** 

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#### PROPOSED PROJECT

The proposed project will include 71 courtrooms. Of the 71 courtrooms, 59 will relocate from the existing County Courthouse located immediately east of the proposed project site. Ten of the 71 courtrooms will relocate from the Madge Bradley and Family Law Courthouse, which are several blocks northeast of the proposed site. One courtroom will relocate from Kearney Mesa, and the project will add one new courtroom. Sixty of the 71 court rooms will provide for jury trials while the remaining will serve probate, small claims, and family court and will not have a jury call. Only 2 of the 71 courtrooms, the new courtroom and the relocated courtroom from Kearney Mesa, will generate new trips into downtown. The project will provide approximately underground 60 parking spaces on the project site for judges and key staff of the court system. All other project-related parking will occur offsite.

The proposed courthouse site contains approximately 45,000 BGSF of commercial existing office uses and an existing 181 space parking lot. The project will demolish the office space on the proposed site, the existing County Courthouse, and the Old Jail. The removal of the buildings will reduce overall existing traffic in the study area and reduce the existing demand for parking. However, removal of the parking lot (181 spaces) will reduce the existing available public parking capacity.

#### TRIP GENERATION RATES

The New San Diego Central Courthouse will operate from 8:00 a.m. to 5:00 p.m. Monday through Friday. The majority of the traffic to and from the site will occur during the a.m. peak as most jurors and visitors leave the facility midday or in the early afternoon before the p.m. peak traffic operations begin. Therefore, the traffic analysis in this report focuses only on the a.m. peak period conditions.

Courthouse trip generation rates are not currently published in ITE or City of San Diego Traffic Generation Manuals. Therefore, trip generation rates for the relocated courthouses are based on trip generation studies conducted for the AOC for this project and/or other projects in California.

#### **County Courthouse Trip Generation Rates**

In January 2000, the County of San Diego prepared a traffic study for the existing San Diego County Courthouse. In that report, the County supplied employment and trip information for the existing 59 courtroom County Courthouse. Information from that report is based on employee surveys collected in 2000:

Total Court Rooms: 59 Total Employees: 750

Total Jurors (per day): 2,100

The research conducted for the County study showed that a total of 2.5 trips per day were made by each employee. In addition, each juror made 2.0 trips per day. The mode split percentages of those trips was:

	Employees	Jurors
Drive Alone:	51%	59%
Transit:	27%	20%
Carpool	13%	5%
Vanpool	3%	4%
Bike/Walk	6%	12%

Of the total trips made to and from the courthouse, there were a total of 1,081 vehicle based employee trips and 2,615 juror vehicle trips per day. This equates to 18.32 employee and 44.32 juror trips per day per court room. Employees and most jurors/visitors arrive at the courthouse during the a.m. peak period (7:30 to 9:00 a.m.). Therefore, 50 percent of the total trips arrive during the a.m. peak. Table 6 summarizes the trip generation rates developed for the County Court building.

Table 6: Trip Generation Rates - County Court Building

Land Use	Daily	AM			
Land Ose	Daily	Total	In	Out	
Employees (trips per court room)	18.32	9.16	8.24	0.92	
Visitor/Juror (trips per court room)	44.32	22.16	19.94	2.22	

#### Family and Probate Court Trip Generation Rates

The proposed project will include the existing 59 court rooms in the County Courthouse along with ten relocated courtrooms from the Family Law (1555 Sixth Avenue) and Madge Bradley (1409 Fourth Avenue) buildings in downtown San Diego. Neither Family Court or Probate Court will require jury calls. Therefore the trip generation for these courts includes only the employees and individuals involved in such court cases.

In January 2010, the AOC commissioned a traffic study1 for a Family Resources courthouse in San Jose, California. The study showed that all employees and most visitors arrived at the courthouse between 8:00 and 9:00 a.m. Results of the trip end

 $<sup>^1\,</sup>Available\ at\ http://www.courtinfo.ca.gov/programs/occm/documents/santa\_clara\_final\_mnd.pdf$ 

survey conducted for a Family Court in San Jose, California (20 court rooms) indicated in Table 7.

Table 7: Trip Generation – Family and Probate Court (No Jury Calls)

Land Use	Daily	AM			
Land Ose	Daily	Total	In	Out	
Employees (trips per court room)	23.1	11.56	10.4	1.16	
Visitors (trips per court room)	49.0	24.50	22.05	2.45	

#### FORECAST OF NET PROJECT TRIP GENERATION

Since the existing operations of the 59-courtroom County Courthouse are only moving one block west and are essentially unchanged, the project's net trip generation includes three components: 1. New trips generated by the AOC's addition of one new courtroom and the relocation of Kearny Mesa courtroom to the new courthouse; 2. Trips associated with the relocation of the existing Madge Bradley and Family Court courtrooms within downtown; and 3. Elimination of existing trips due to demolition of the buildings on the proposed courthouse site, demolition of the County Courthouse (which forces relocation of the County's staff that work in the building), and demolition of the Old Jail

#### 1. New Downtown San Diego Courtrooms

Only trips associated with the relocation from Kearney Mesa and the one new proposed courtroom will generate new trips into downtown San Diego. Overall, the project will generate 134 new vehicle-based trips within the study area when trip generation rates for courthouse facilities are applied to the two new courtrooms that will be in downtown San Diego. There will be 68 a.m. peak hour trips. Table 8 shows trip generation rates developed for this project.

Table 8: Forecast Trips Generated by New Courtrooms and Courtrooms Relocated from Outside Downtown San Diego

Land Use	Daily		AM	<u> </u>					
Land Ose	Daily	Total	In	Out					
TRIP GENERATION RATES									
General Court (jury)									
Employees (trips per court room)	18.32	9.16	8.24	0.92					
Visitors & jurors (trips per court room)	44.32	22.16	19.94	2.22					
NEW TRIPS ASSIGNED TO S	TUDY AREA	<b>\</b>							
General Court (jury): 1 new o	courtroom								
Employees	18	9	8	1					
Visitors & Jury	44	22	20	2					
Family & Probate Court (non	jury): 1 cou	irtroom reloc	ated from K	earney Mesa					
Employees	23	12	10	2					
Visitors	49	25	22	3					
New Trips Generated in Downtown San Diego	134	68	60	8					

# 2. Madge Bradley and Family Law Court Relocation to New San Diego Central Courthouse

The project will relocate 10 courtrooms from the Madge Bradley and Family Law Court buildings that currently reside in downtown San Diego on Fourth and Sixth Avenues. Exhibit 5 illustrates the location of the existing buildings and the proposed court house. The trips associated with the relocation of the existing courtrooms within downtown are not new trips to downtown San Diego. As summarized in Table 9, these two courtrooms currently generate approximately 361 vehicle based trips during the a.m. peak period. The travel patterns into and around downtown for these relocated courtrooms are likely to shift due to the relocation of the judicial operations and their associated parking demand. The change in traffic patterns associated with the relocation of the Madge Bradley and Family Law courtrooms trips is included in the analysis of Existing plus Project conditions.

Table 9: Existing Trips to be Redistributed

Land Use	Deily	AM							
Land Ose	Daily	Total	ln	Out					
TRIP GENERATION RATES – Family & Probate (Non-Jury) (1)									
Employees (trips per court room)	23.1	11.56	10.4	1.16					
Visitors (trips per court room)	49.0	24.50	22.05	2.45					
FORECAST RESTRIBUTED TRIPS - Family & Probate (Non-Jury)									
Employees (10 court rooms)	231	116	104	12					
Visitors (10 court rooms)	490	245	221	24					
Existing Trips Redistributed in Downtown San Diego	721	361	325	36					

<sup>(1)</sup> Source: Trip generation reported for County of San Diego Courthouse & San Jose Family Resources Courthouse

## 3. Removal of Existing Land Uses From Proposed Project Site, County Courthouse, and Old Jail

The preferred courthouse site includes an approximately 45,000 square foot set of buildings. There are two buildings with four stories each and a single story-building that is between the two larger buildings. The buildings provide office space for legal, bail bond, and restricted income legal support. To estimate the number of trips currently on the roadway network from these buildings, trip generation rates were applied to the existing square footage based on City of San Diego Office Building Trip Generation Rates.

The County shares space in the County Courthouse with the Superior Court. The County's Child Support Services and Health and Human Services occupy approximately 56,000 square feet of space in the building. After completion of the new courthouse, the County's Child Support Services, and Health and Human Services staff will vacate the County Courthouse. It is anticipated that these trips will leave downtown San Diego and were therefore removed from the study area.

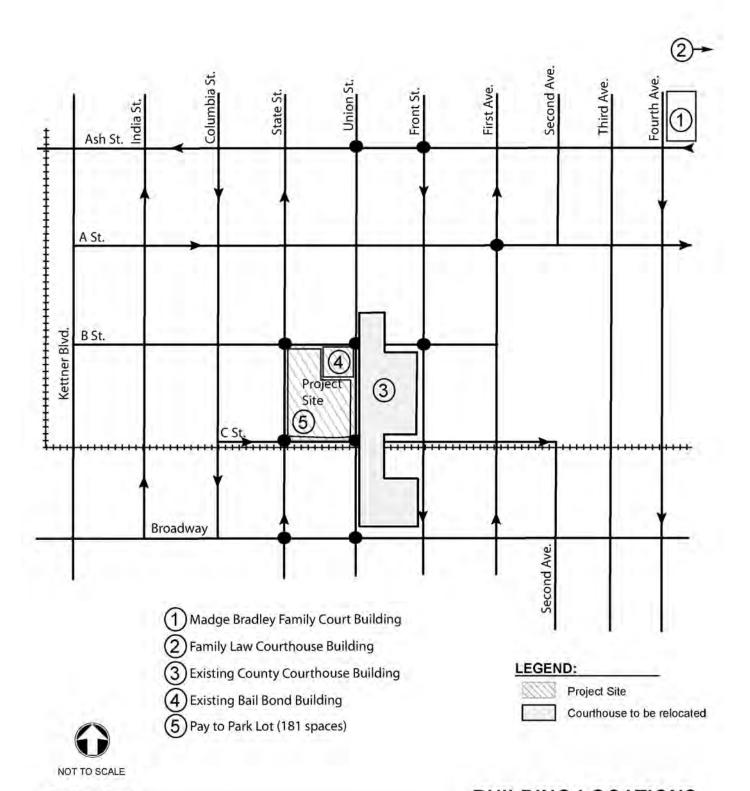
The County also leases the Old Jail from the AOC, and the County sub-leases the Old Jail to a private party that operates the detention facility. With the demolition of the Old Jail, trips associated with that use will also be removed from the study area. There are approximately 65 employees at the facility that report in on a daily basis. Therefore, 65 a.m. peak period trips were removed from the roadway network for this analysis of project related impacts.

The proposed project will remove the existing buildings from the proposed courthouse site, the County Courthouse, the Old Jail, and the existing 181 space public parking lot. The removal of the courthouse site's buildings, the County's space in the County Courthouse, and the Old Jail will reduce traffic volume within the study area by approximately 2,142 trips per day with a reduction of 326 a.m. peak period trips. Table 10 summarizes the reduction in traffic associated with the removal of the existing buildings.

Table 10: Existing Trips Associated with Removal of Uses within the Study Area

Land Use	Daily	AM			
Land OSE	Daily	Total	In	Out	
TRIP GENERATION RATES					
Commercial Office Building (Trips per 1,000 sf)	Ln(T) = 0.756 Ln(x) + 3.95	13%	90%	10%	
Jail	2 trips per day per employee	1 50%   90%		10%	
EXISTING ESTIMATED TRIPS TO R	EMAIN				
Commercial Office Building <sup>(1)</sup> (removal of 45,000 sf)	-923	-120	-108	-12	
San Diego County Office Use within Existing Courthouse (removal of 56,000 sf)	-1,089	-141	-127	-13	
Old Jail (removal of 65 staff per day)	-130	-65	-58	-7	
TOTAL REMOVED TRIPS	-2,142	-326	-293	-33	

<sup>(1)</sup> **Source**: City of San Diego Trip Generation Rates (2003) The daily trip generation rate is based on the equation provided in the City's Traffic Generation Manual. The number of trips (T) is a function of (x), which is number of units. In this case, the number of units is expressed in 1,000 sf.





BUILDING LOCATIONS

25-104231.001 May 2010 EXHIBIT 5

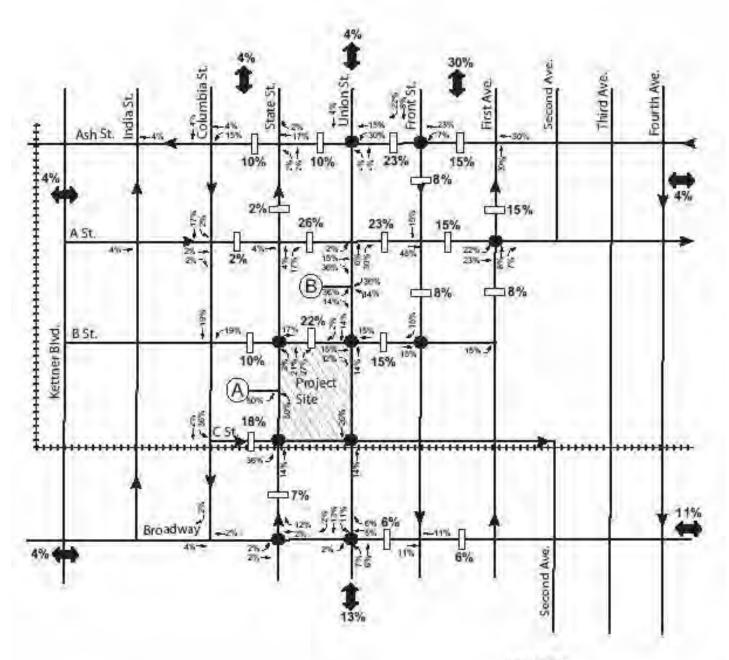
#### **DISTRIBUTION OF NEW PROJECT TRIPS**

Exhibit 6 shows distribution percentages used in this evaluation. The distribution percentages were applied to the new trips generated by the site and the reassignment of existing downtown trips associated with the Madge Bradley & Family Law Courthouses. The trip distribution accounts for limited, restricted parking will be provided onsite and all other vehicles parking in public parking facilities near the courthouse. Although multiple public parking facilities are available within three blocks of the site, the distribution of traffic assumes drivers are primarily use two parking lots closest to the building. This provides for an increased concentration in trips near the courthouse and may represent the circulation of traffic that occurs when drivers search for available public parking spaces.

#### TRIP ASSIGNMENT

The new or reassigned project volumes associated with the new courthouse are illustrated in Exhibit 7. Exhibits 8 through 11illustrate the individual distribution or redistribution of trips associated with each of the components of the project that make up the total trip assignment:

- New Trips to Downtown (relocation of one courtroom from Kearney Mesa & one new court room trip assignment) - Exhibit 8;
- Redistribution of Madge Bradley and Family Law Courtrooms Exhibit 9;
- Removal of Existing Madge Bradley and Family Law Courtroom Trips Exhibit 10; and
- Removal of Existing Trips Associated with the Old Jail, Existing Buildings on Proposed Site and Existing San Diego County Office Space within Existing Courthouse – Exhibit 11



XX% / Percent Peak Hour Trips
XX% Percent Daily Trips

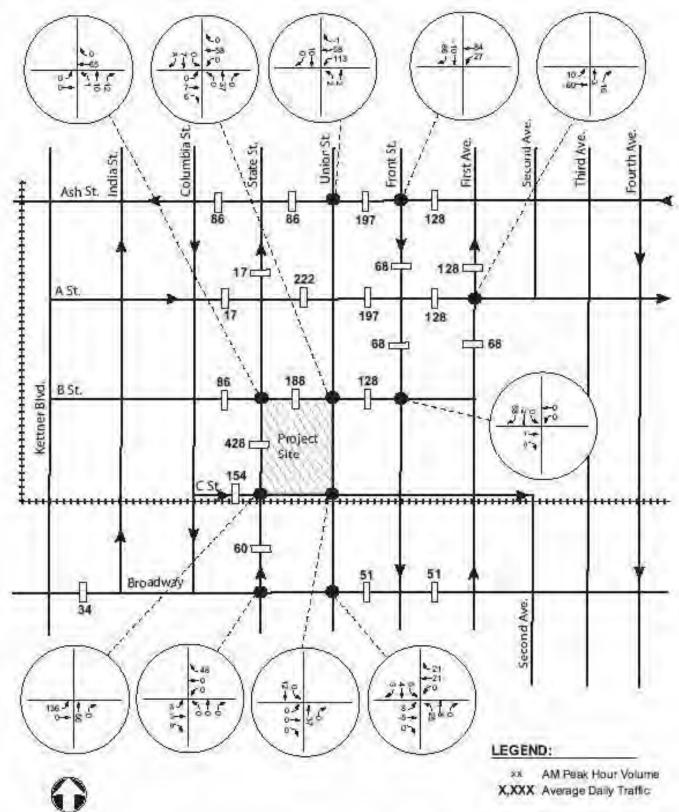
(A) Parking Lat.

(B) Parking Lot



## TRIP DISTRIBUTION PERCENTAGES

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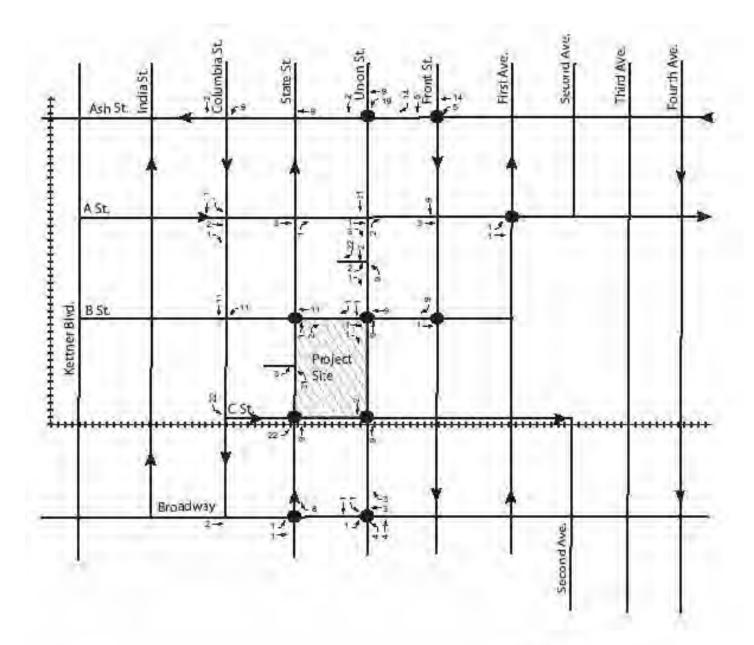




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PROJECT TRIP ASSIGNMENT

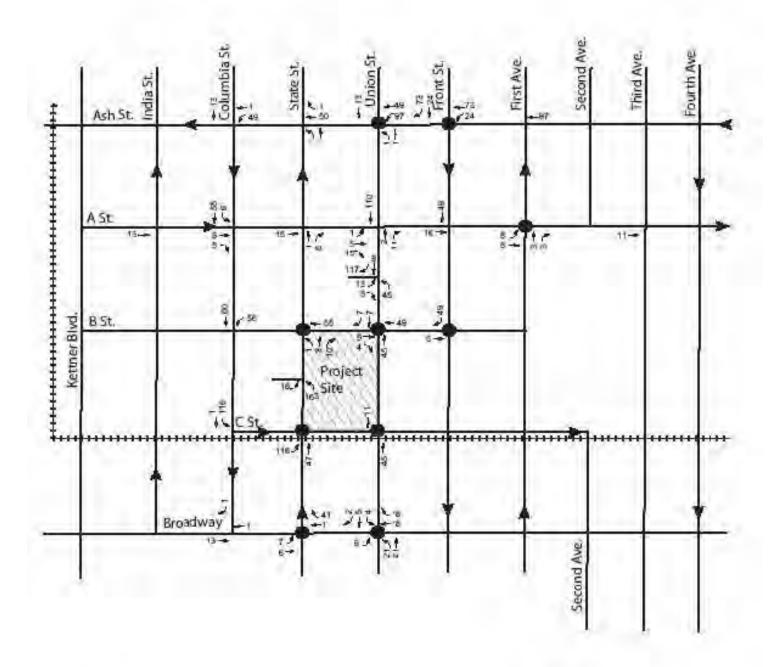


xx.F Number Peak Hour Trips





**NEW TRIP ASSIGNMENT** 

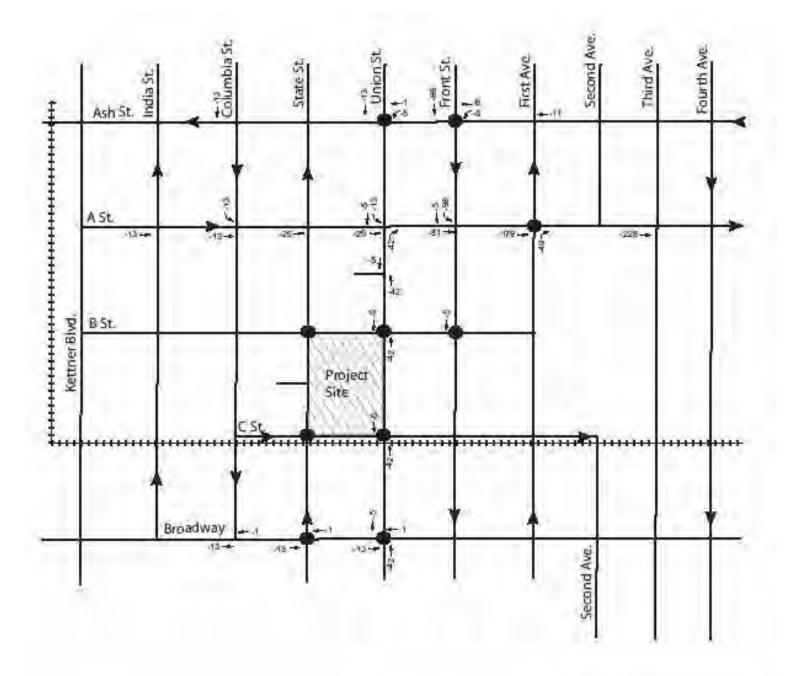


xx J Number Peak Hour Typs



25-104621.001 May 2010

# REDISTRIBUTED MADGE BRADLEY AND FAMILY LAW TRIPS

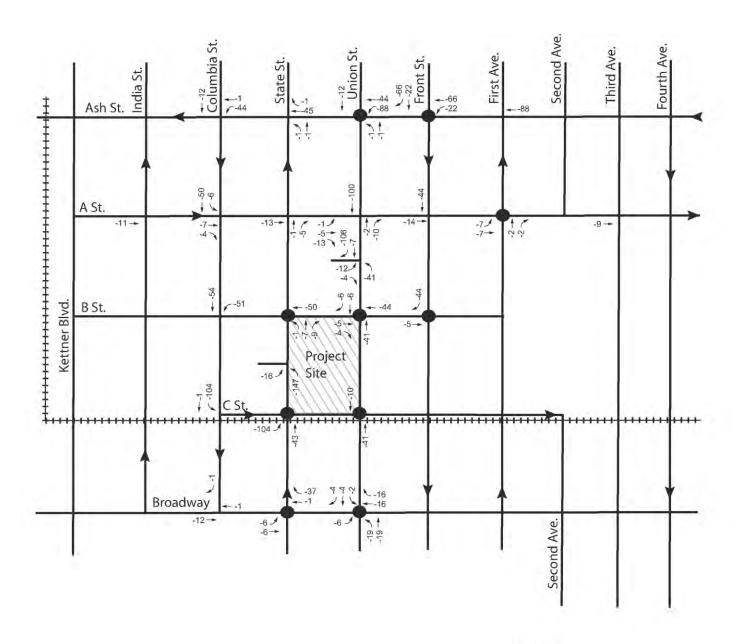


XX J Number Peak Hour Trips



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# REMOVAL OF MADGE BRADLEY AND FAMILY LAW TRIPS



xx / Number Peak Hour Trips



REMOVAL OF OLD JAIL, SD COUNTY COURT USES
WITHIN EXISTING COURTHOUSE AND EXISTING
OFFICE BUILDINGS ON PROPOSED SITE



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#### **EXISTING PLUS PROJECT CONDITIONS**

Overlaying the trips identified in Exhibit 7 with the existing conditions traffic volumes provided the forecast a.m. peak traffic volumes with the proposed project. The Existing plus Project traffic volumes are illustrated in Exhibit 12.

The Existing plus Project traffic volumes were evaluated using existing conditions intersection geometry and traffic control. Tables 11 and 12 display results of the Highway Capacity Manual intersection operating conditions levels of service and roadway segment level of service analysis. As shown in Tables 11 and 12, all intersections and roadway segments are forecast to operate at an acceptable level of service. Detailed LOS worksheets are in Appendix C.

Table 11: Existing Plus Project Conditions Intersection LOS – AM Peak

Study Intersection	Control	Existing No Project  Delay - LOS		Existing Plus Project		Change in AM	
Study Intersection	Control			Delay -	LOS	Peak Hour Delay	
Ash Street / Union Street	S	6.2	Α	5.8	Α	-0.4	
Ash Street / Front Street	S	19.9	В	19.6	В	-0.3	
First Avenue / A Street	S	17.2	В	18.2	В	1.0	
B Street / State Street	U	9.3	Α	9.4	Α	0.1	
B Street / Union Street	U	10.3	В	10.3	В	0.0	
B Street / Front Street	S	6.1	Α	6.1	Α	0.0	
C Street / State Street	U	10.9	В	12.1	В	1.2	
C Street / Union Street	U	10.5	В	10.4	В	-0.1	
Broadway / State Street	S	0.0	А	0.0	Α	0.0	
Broadway / Union Street	S	8.5	Α	8.7	Α	0.2	

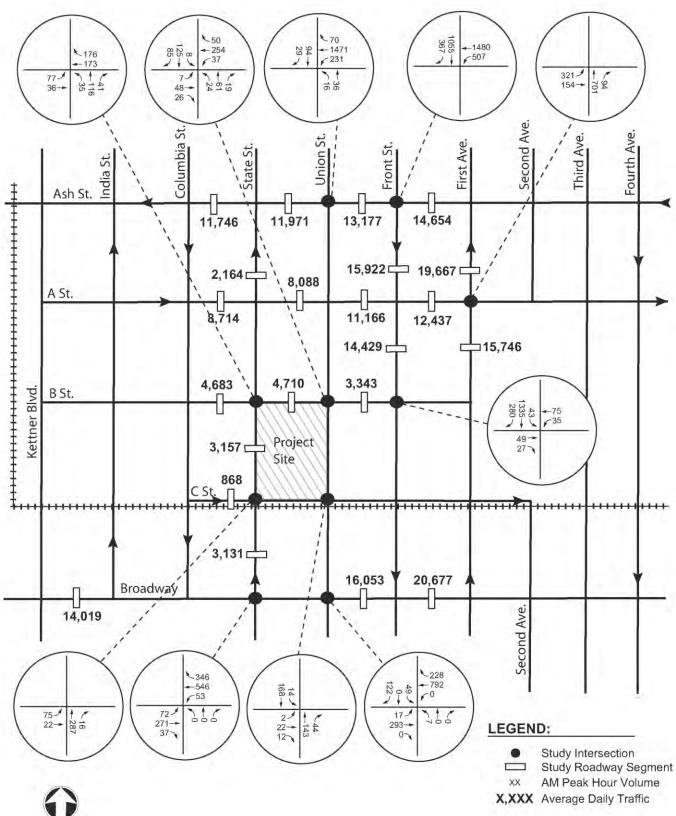
Note: Deficient intersection operation shown in bold;

Control: S= signalized , U= unsignalized

Table 12: Existing Plus Project Roadway ADT Volumes and LOS

	Table 12: Existing Plus Project Roadway ADT Volumes and LOS							
		Class	LOS E	Existing	Existing Plus Project		Change	
Roadway	Location	(# Lanes)	Capacity	V/C	ADT	V/C	LOS	in V/C
Ash Street	Columbia Street to State St.	Major one-way (3)	25,000	0.47	11,746	0.47	В	0.00
	State Street to Union Street	Major one-way (3)	25,000	0.48	11,971	0.48	В	0.01
	Union Street to Front Street	Major one-way (3)	25,000	0.54	13,177	0.53	В	-0.01
	Front Street to First Avenue	Major one-way (3)	25,000	0.59	14,654	0.59	С	0.01
	Columbia Street to State St.	Major one-way (3)	25,000	0.35	8,714	0.35	Α	0.00
A Street	State Street to Union Street	Major one-way (3)	25,000	0.34	8,088	0.32	Α	-0.02
A Stieet	Union Street to Front Street	Major one-way (3)	25,000	0.46	11,166	0.45	В	-0.01
	Front Street to First Avenue	Major one-way (3)	25,000	0.51	12,437	0.50	В	-0.01
B Street	Columbia Street to State St.	Local (2)	8,000	0.60	4,683	0.59	С	-0.01
	State Street to Union Street	Local (2)	8,000	0.62	4,710	0.59	С	-0.03
	Union Street to Front Street	Local (2)	8,000	0.44	3,343	0.42	В	-0.02
C Street	Columbia Street to State St.	Local one-way (2)	8,000	0.14	868	0.11	Α	-0.03
	Kettner Blvd. to India Street	Collector (4)	30,000	0.47	14,019	0.47	С	0.00
Broadway	Union Street to Front Street	Collector (4)	30,000	0.54	16,053	0.54	С	0.00
	Front Street to First Avenue	Collector (4)	30,000	0.69	20,677	0.69	D	0.00
State Street	Ash Street to A Street	Local one-way (3)	10,000	0.22	2,164	0.22	Α	0.00
	B Street to C Street	Local one-way (3)	10,000	0.38	3,157	0.32	Α	-0.06
J. 1001	C Street to Broadway	Local one-way (3)	10,000	0.32	3,131	0.31	Α	-0.01
Front	Ash Street to A Street	Major one-way (3)	25,000	0.64	15,922	0.64	С	0.00
Street	A Street to B Street	Major one-way (3)	25,000	0.58	14,429	0.58	С	0.00
1 <sup>st</sup> Avenue	Ash Street to A Street	Major one-way (3)	25,000	0.79	19,667	0.79	С	0.00
i Avenue	A Street to B Street	Major one-way (3)	25,000	0.63	15,746	0.63	С	0.00

Note: Deficient roadway segment operation shown in **bold**.





NOT TO SCALE

### **EXISTING PLUS PROJECT CONDITIONS**

**EXHIBIT 12** 

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#### **CUMULATIVE PROJECTS**

Cumulative conditions evaluate the traffic operations at project opening year. To complete this analysis, a list of projects that are approved or are pending approval and are anticipated to be occupied by project opening Year 2016 according to CCDC's Downtown Community Plan. After discussing the project's with CCDC's Staff, it was determined that the development of many of the projects were uncertain, but were accounted for in the recent update in the Downtown Community Plan long range forecast (year 2030). Therefore, the year 2016 traffic volumes were determined using an annualized growth rate factor. An annual growth rate factor of approximately two percent (2%) per year was calculated based on the forecast change in volume from 2010 (existing conditions) to 2030 (buildout of future project in downtown San Diego). Cumulative a.m. peak hour and ADT volumes through year 2016 are presented in Exhibit 13.

#### Reuse of Madge Bradley Courthouse and Family Law Courthouse as Office Space

The removal of the Madge Bradley and Family Law Courtrooms from its existing site will create an opening for re-use of the vacated office space use. This scenario will create additional trips on the roadway network. Table 13 summarizes the comparison of the existing court room use and the proposed office use. As shown in Table 13, the conversion from courtroom to office building will generate fewer a.m. peak hour trips and a greater number of p.m. peak hour trips when compared to the existing use.

New trips associated with the reuse of the Madge Bradley and Family Law Courtrooms as an office is shown in Exhibit 14. The 1,685 trips per day associated with the conversion of the Madge Bradley Courthouse and Family Law Courthouse to office space is accounted for in the Existing plus Cumulative plus Project Conditions.

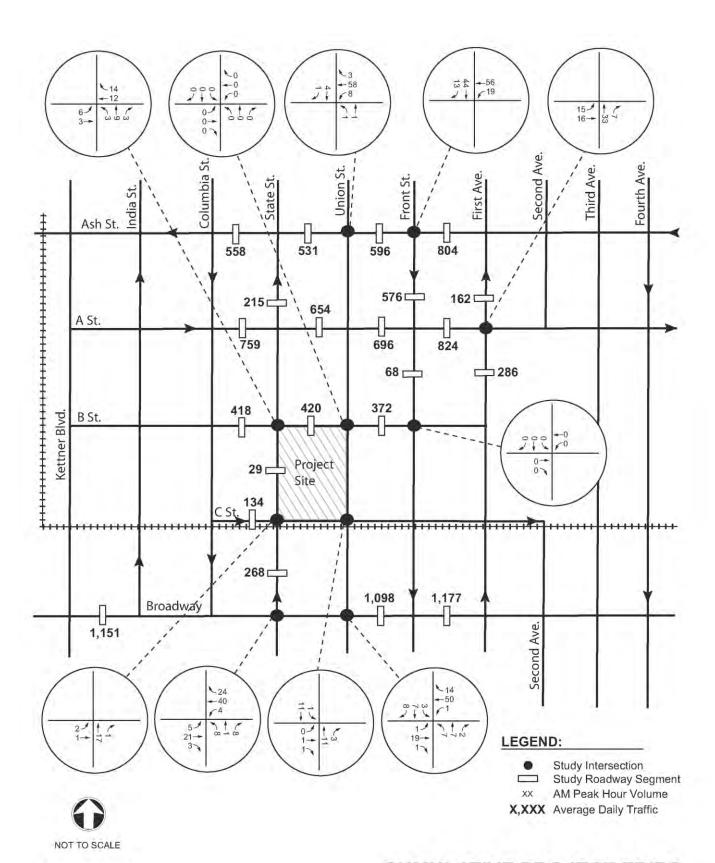
Table 13: Comparison of Court Room Trip Generation with Office Space Trip Generation

Madge & Family Court Room Relocation

Landillas	Daily		AM		PM			
Land Use	Daily	Total	In	Out	Total	In	Out	
Trip Generation Rates (1)								
Office Building <sup>(1)</sup> (trips per 1,000 sf)	Ln(T) = 0.756 Ln(x) + 3.95	13%	90%	10%	14%	20%	80%	
Forecast New Office Relate	d Trips <sup>(2)</sup>							
Office Space 100,000 sf Office Space	1,685 trips per day	219	197	22	236	47	189	
Net Change in Trips	+964 trips per day	-142	-128	-14	+236	+47	+189	

(1) Source: City of San Diego Trip Generation Rates (2003)

(2) Source: Trip generation reported for County of San Diego Courthouse & San Jose Family Resources



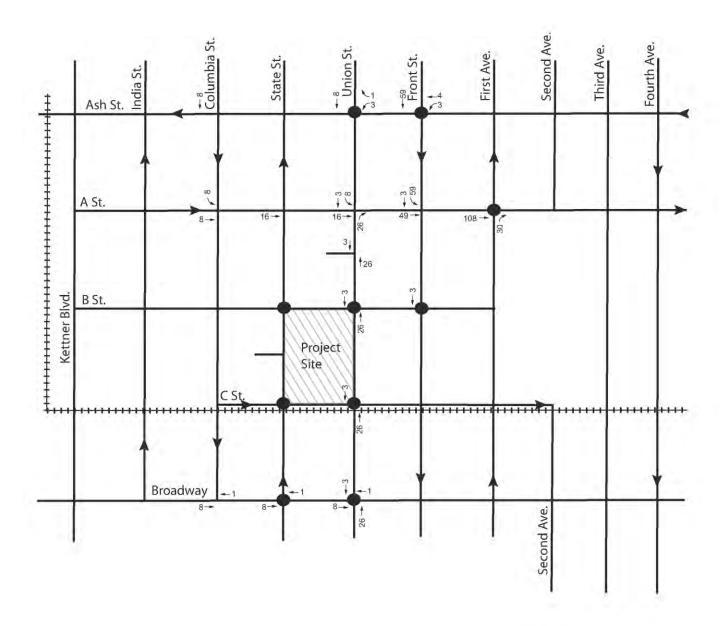


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**CUMULATIVE PROJECT TRIPS** 

EXHIBIT 13



LEGEND:

xx / Number Peak Hour Trips



## TRIPS ASSOCIATED WITH REUSE OF MADGE BRADLEY AND FAMILY LAW AS OFFICE



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EXHIBIT 14

#### **CUMULATIVE CONDITIONS**

To establish the baseline Year 2016 conditions, the growth rate factor was applied to the existing traffic volumes. Exhibit 15 displays existing plus Cumulative a.m. peak hour and average daily traffic volumes. Using these volumes and existing intersection geometry and traffic control, Year 2016 baseline conditions were evaluated. Tables 14 and 15 show the results of the intersection and roadway segment operational analysis, respectively.

Project traffic was then added to the baseline 2016 volumes to evaluate the impacts in the project opening year. Existing Plus Cumulative Plus Project conditions are illustrated in Exhibit 16. As shown in Tables 14 and 15, all intersections and roadway segments are forecast to operate at an acceptable level of service by Year 2016. Cumulative conditions level of service worksheets are provided in Appendix E.

Table 14: Cumulative Conditions Intersection LOS AM Peak Hour

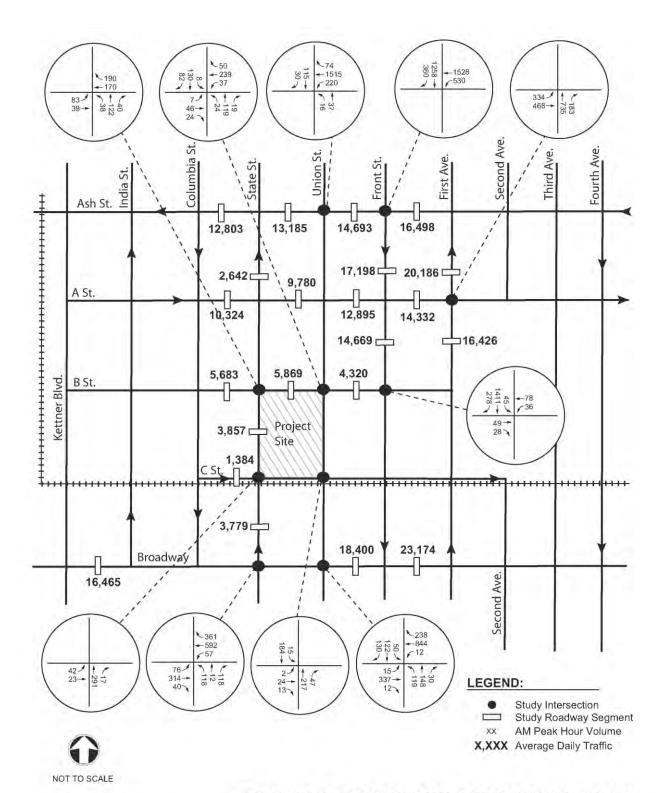
		No P	roject	With P	roject	Change in Delay
Study Intersection	Control		ak Hour - LOS	AM Pea Delay		AM Peak Hour
Ash Street / Union Street	S	6.3	Α	6.6	Α	0.3
Ash Street / Front Street	S	20.4	С	20.6	С	0.2
First Avenue / A Street	S	17.3	В	17.1	В	-0.2
B Street / State Street	U	9.6	А	9.6	А	0.0
B Street / Union Street	U	10.3	В	10.5	В	0.2
B Street / Front Street	S	6.2	А	6.2	А	0.0
C Street / State Street	U	11.1	В	11.1	В	0.0
C Street / Union Street	U	10.6	В	10.7	В	0.1
Broadway / State Street	S	11.6 B		11.6 B		0.0
Broadway / Union Street	S	15.8 B		16.3 B		0.5

Note: Deficient intersection operation shown in **bold** Control: S= signalized , U= unsignalized

Table 15: Cumulative Conditions Roadway ADT Volumes and LOS

		Class	LOS E	Existing Plus Cumulat	Exis Cumu F		Change in V/C	
Roadway	Location	(# Lanes)	Capacity	ive ADT	ADT	V/C	LOS	in V/C
	Columbia Street to State St.	Major one-way (3)	25,000	12,803	12,674	0.51	В	-0.01
Ash Street	State Street to Union Street	Major one-way (3)	25,000	13,185	13,056	0.52	В	-0.01
Asii Street	Union Street to Front Street	Major one-way (3)	25,000	14,693	14,397	0.58	С	-0.01
	Front Street to First Avenue	Major one-way (3)	25,000	16,498	16,304	0.65	С	-0.01
	Columbia Street to State St.	Major one-way (3)	25,000	10,324	10,298	0.41	В	0.00
A Street	State Street to Union Street	Major one-way (3)	25,000	9,780	9,446	0.38	Α	-0.01
A Street	Union Street to Front Street	Major one-way (3)	25,000	12,895	12,599	0.50	В	-0.01
	Front Street to First Avenue	Major one-way (3)	25,000	14,332	14,139	0.57	С	-0.01
	Columbia Street to State St.	Local (2)	8,000	5,683	5,555	0.69	D	-0.02
B Street	State Street to Union Street	Local (2)	8,000	5,869	5,586	0.70	D	-0.04
	Union Street to Front Street	Local (2)	8,000	4,320	4,127	0.52	С	-0.02
C Street	Columbia Street to State St.	Local one-way (2)	8,000	1,384	1,152	0.14	Α	-0.03
	Kettner Blvd. to India Street	Collector (4)	30,000	16,465	16,414	0.55	С	0.00
Broadway	Union Street to Front Street	Collector (4)	30,000	18,400	18,323	0.61	С	0.00
	Front Street to First Avenue	Collector (4)	30,000	23,174	23,097	0.77	D	0.00
Ctata	Ash Street to A Street	Local one-way (3)	10,000	2,642	2,616	0.26	Α	0.00
State Street	B Street to C Street	Local one-way (3)	10,000	3,857	3,214	0.32	Α	-0.06
0001	C Street to Broadway	Local one-way (3)	10,000	3,779	3,689	0.37	Α	-0.01
Front	Ash Street to A Street	Major one-way (3)	25,000	17,198	17,095	0.68	С	0.00
Street	A Street to B Street	Major one-way (3)	25,000	14,669	14,566	0.58	С	0.00
1 <sup>st</sup> Avenue	Ash Street to A Street	Major one-way (3)	25,000	20,186	19,993	0.80	С	-0.01
Avenue	A Street to B Street	Major one-way (3)	25,000	16,426	16,323	0.65	D	0.00

Note: Deficient roadway segment operation shown in **bold**.



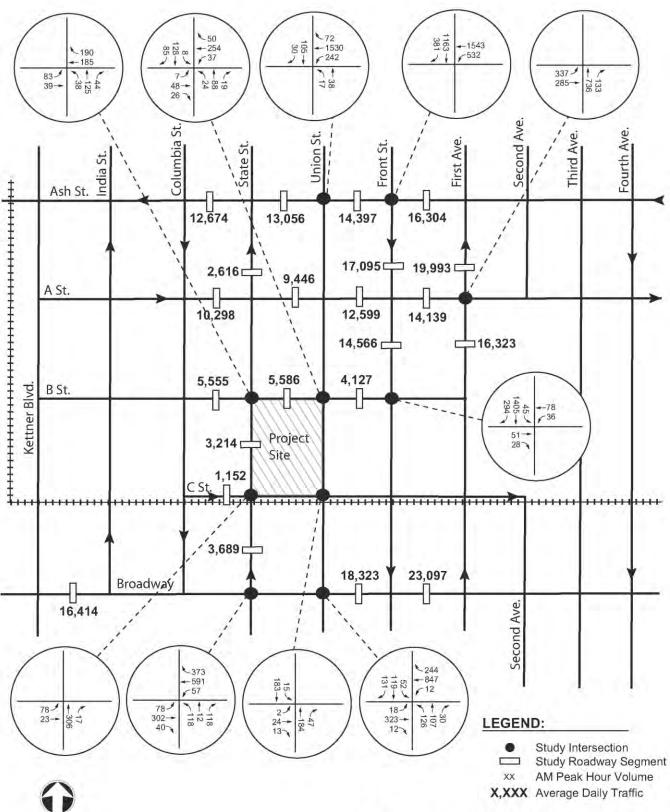


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**EXISTING PLUS CUMULATIVE CONDITIONS** 

EXHIBIT 15





NOT TO SCALE

**EXISTING PLUS CUMULATIVE PLUS PROJECT CONDITIONS** 



25-104231.001 May 2010 **EXHIBIT 16** 

#### **PARKING**

The Superior Court will vacate use of 66 parking spaces on the County-owned block between State Street, A Street, Union Street, and B Street and one space in the County Courthouse, and the new courthouse will provide approximately 110 secured underground parking spaces for judges and court staff. The new courthouse's parking capacity eliminates part of the parking demand associated with the Superior Court's consolidation of its Madge Bradley and Family Law operations, the Kearney Mesa courtroom, and the new courtroom.

To determine the existing available parking around the project, an inventory of available public parking near the proposed courthouse site was conducted. The inventory revealed that there are more than 2,620 public parking spaces within a three block radius of the proposed project site. The parking spaces are in surface parking lots (874 spaces) and public parking structures (1,746 spaces).

Although the parking lots are currently shared by other uses downtown, a survey of the 15 surface parking lots in closest proximity to the project site demonstrates that the existing parking lots are not fully occupied and sufficient parking is available to serve the proposed project.

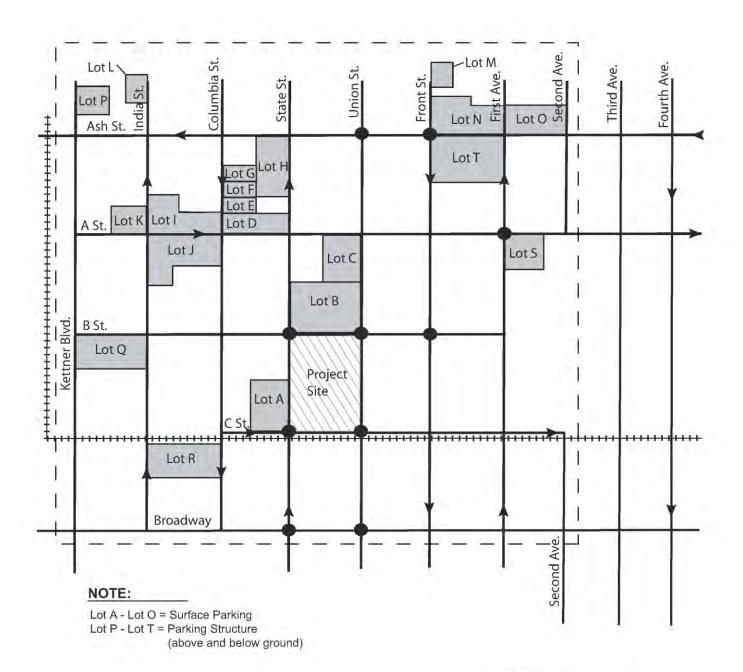
Table 16 summarizes the results of a survey of existing available parking in surface parking lots within three blocks of the project site. The survey was conducted from 7:30 to 9:30 a.m. on March 24, 2010 specifically for this project. As shown in Table 16, the 15 surface parking lots inventoried account for 874 parking spaces. Exhibit 16 illustrates the location of the surface parking lots surveyed for this project. The proposed courthouse site currently provides 181 parking spaces.

Most courts require that jurors and staff report prior to 9:00 a.m. At 8:30 a.m., when a large portion of trips would arrive to the courts, approximately 395 spaces were observed to be unoccupied (45%).

Table 16: Occupancy Survey - Surface Parking Lots in Immediate Vicinity of Project Site

Parking	Total			Unoccupie			% Available at
Lot	Spaces	7:30 AM	8:00 AM	8:30 AM	9:00 AM	9:30 AM	8:30 AM
Α	61	7	8	1	6	3	1.6%
В	163	111	85	77	60	53	47.2%
С	49	42	32	28	23	18	57.1%
D	45	22	17	6	0	1	13.3%
E	17	16	15	14	10	7	82.4%
F	22	20	16	15	15	11	68.2%
G	19	11	13	12	9	8	63.2%
Н	68	36	30	22	20	15	32.4%
I	58	34	26	13	13	14	22.4%
J	88	72	62	51	43	30	58.0%
K	40	32	28	20	20	16	50.0%
L	28	20	17	14	11	9	50.0%
M	34	26	21	18	15	11	52.9%
N	94	64	49	44	28	19	46.8%
0	88	80	67	60	50	43	68.2%
TOTAL	874	593	486	395	323	258	45.2%

Note: See Exhibit 16 for parking lot locations.



	LE	GEN	D:
_	-	-	Boundary of 3 block study area



### **EXISTING PARKING LOT LOCATIONS**

KBI-

25-104231.001 May 2010

EXHIBIT 17

The trip generation analysis showed 385 new inbound a.m. peak period trips associated with the project. This accounts for the one new courtroom, relocation of Madge Bradley and Family Law and the relocation of the Kearney Mesa courtroom. For this analysis it is assumed that 15 of these trips are associated with judges or key personnel who will park on site in the available 60 spaces. Therefore, the a.m. peak period demand for off-site parking is 370 vehicles.

The existing available surface parking lots would have sufficient capacity to accommodate the additional parking demand for the project. Additional parking would also be available in the surrounding parking structures and in parking lots outside the three block radius. Therefore, sufficient parking capacity is available to serve this site.

As stated previously, the existing building and existing public parking lot located on the proposed project site will be demolished with the construction of the new courthouse. With the removal of these uses, both parking demand and parking supply will be reduced. The existing 181 space public parking lot will be removed from the existing available inventory in downtown San Diego. With this understanding, the public parking lot contained on the site was not included in the evaluation of available parking capacity with the proposed project.

The existing uses on the site (45,000 sf of office space) generate a demand for parking that will be eliminated when the courthouse is constructed. During the survey period, approximately 125 of the 181 parking spaces were occupied within this lot. Observations showed that this lot is used by both visitors of the existing buildings and by those who park and walk to other destinations downtown. In addition, removal of the Old Jail and the San Diego County office uses within the existing Courthouse will reduce the demand for parking around the project site. According to the trip generation forecast for the a.m. peak period, 326 trips during the a.m. peak period would be removed. It is reasonable to assume that this demand for parking would also be removed during the a.m. peak period when parking demand for the courthouse peaks.

As stated previously, there are more than 2,620 parking spaces located in downtown within three blocks of the proposed project site (not including the existing parking lot on the property). The survey showed that nearly half of these parking spaces in both surface lots and parking structures were available during the survey period from 7:30 to 9:30 a.m. Clearly the 326 a.m. peak period trips removed from the network exceeds the number of spaces removed (181) with the site.

#### CONCLUSION

This study analyzes the forecast traffic impact of the proposed San Diego County Courthouse project in the downtown area of the City of San Diego. The proposed location is bound by B Street to the north, C Street to the south, State Street to the east, and Union Street to the west. An office building and a public parking lot currently occupy the site.

The proposed project will include 71 courtrooms. Of the 71 courtrooms, 59 will relocate from the existing courthouse immediately east of the proposed project site. Ten of the 71 courtrooms will relocate from the Madge Bradley and Family Law Courthouse several blocks northeast of the proposed courthouse site. One courtroom will be relocate from Kearney Mesa, and the AOC will add one new court room. Sixty of the 71 court rooms will provide space for jury trials, while the remaining courtrooms will serve probate, small claims, and family court and will not have a jury call. Only two of the courtrooms, the new courtroom and the relocated courtroom from Kearney Mesa, will generate new trips to downtown San Diego.

Construction of the new building will displace one set of existing office buildings and a public parking lot (181 spaces). The removal of these buildings will reduce the parking demand traffic in the study area.

After the completion of the new courthouse, the courts will vacate all existing facilities. The AOC will demolish the existing County Courthouse and Old Jail. The AOC currently has no plans to redevelop the existing County Courthouse site.

The proposed project will generate approximately 134 new trips per day. Another 721 trips per day will be redistributed through downtown to account for the relocation of the Madge Bradley and Family Law courthouses. During the a.m. peak period, 385 new trips per day will be added to the roadway network in the vicinity of the proposed project site.

In addition to evaluating traffic operating conditions, this report also discusses the project parking demands. The Superior Court will vacate use of 66 parking spaces on the County-owned block between State Street, A Street, Union Street, and B Street and one space in the County Courthouse, and the new courthouse will provide approximately 110 secured underground parking spaces for judges and court staff. The new courthouse's parking capacity eliminates part of the parking demand associated with the Superior Court's consolidation of its Madge Bradley and Family Law operations, the Kearney Mesa courtroom, and the new courtroom. All others will be required to park off site in the existing surface parking lots, public parking structures or on the street. In

addition to the existing offsite demand, a total of 370 parking spaces will be needed to serve the new courthouse.

Analysts calculated project-generated trips based on rates established for similar facilities. Courtroom trip rates were categorized in to jury and non-jury trials. The forecast project-generated trips were assigned to the roadway network and added to the existing a.m. peak hour and daily volumes to determine the short-term project impacts. The addition of the forecast project-generated trips to the existing conditions does not result in a change in LOS from acceptable to deficient at any study intersection or along any study roadway segment. Therefore, no significant impacts are forecast for any study intersections under Existing Plus Project conditions.

The project is forecast to open in the year 2013. To evaluate traffic operations for the project opening year, a growth rate factor was applied to all intersections and roadway segments. Growth rate factors were calculated based on forecast year 2030 volumes prepared for the Downtown Community Plan Update. This cumulative condition was evaluated with and without the proposed project.

Based on City of San Diego significant impact thresholds, no direct project impacts are identified for Existing or Cumulative conditions. Therefore, no mitigation is required.

The project will provide 60 on-site parking spaces. These spaces will be restricted to judges and key court staff. All other vehicles will be required to park off-site in public parking lots. An inventory of available public surface parking lots revealed that there are 874 parking spaces within a three block radius of the project site. A field occupancy survey conducted in March 2010 revealed that at 8:30 a.m., when the peak demand for parking for the courts would be occur, approximately 45% of the total surface parking spaces were unoccupied. The project would have a need for 370 parking spaces. Clearly this demand could be met by the surface parking spaces alone, with 395 parking spaces available at 8:30 a.m. However, there are over 1,700 public parking spaces available in parking structures near the project site. The demand for parking for the courthouse would be met both in the existing parking structures and parking lots. Therefore, there is sufficient parking within the three block radius to meet the parking demands of the courthouse.

Although the project will remove 181 parking spaces that currently exist on the proposed site, the project will also reduce the demand for parking. According to the trip generation analysis, the removal trips associated with the demolition of the existing courthouse and the demolition of the existing office buildings on the proposed site will result in a decline in parking demand by as much as 326 vehicles. Therefore, the removal of the parking lot will not negatively impact the parking supply in the project vicinity.

### <u>APPENDIX A</u>

### **Existing Traffic Count Data**

## **Intersection Turning Movement**

#### Prepared by: **National Data & Surveying Services**

N-S STREET: Union St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: Ash St

DAY: THURSDAY

PROJECT# 10-4107-002

	NC	RTHBO	JND	SC	OUTHBO	UND	Ē	ASTBOU	ND	W	/ESTBOL	IND	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 0	ER 0	WL 0	WT 3	WR 0	TOTAL
7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM 9:00 AM 9:15 AM	3 1 4 5 5 2 7 5	4 9 8 5 13 5 10 9		· ***	11 21 32 21 28 31 13 14	3 9 8 1 11 11 5				62 56 56 52 43 40 29 27	306 364 343 373 364 329 266 249	13 20 15 20 15 8 12 10	402 480 466 477 479 426 342 321
TOTAL VOLUMES =	NL 32 ek Hr Be	NT 63 egins at:	NR 0 745	SL 0	ST 171	SR 55	EL 0	ET 0	ER 0	WL 365	WT 2594	WR 113	TOTAL 3393
PEAK VOLUMES = PEAK HR. FACTOR:	15	35 0.694	0	0	102 0.819	29	0	0.000	0	207	1 <del>444</del> 0.967	70	1902 0.991

CONTROL:

Signalized



National Data & Surveying Services

#### Union St and Ash St, City of San Diego

				Peak Hour Summary					
	Date:	3/25/2010	2 Parties	Southbound Approach		Project #	#: <u>10-4</u>	107-002	
	Day:	Thursday	200 200 300	0 1 0 Lanes	N _				
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			Union St		111	NOON Peak			
			5	0 0 0 NOON		PM Peak H	lour:		
				0 0 PM					
		Ash St		신비바	7				
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				0 1 0 Lanes					
(	Control:	Signalized		Northbound Approach					

## **National Data & Surveying Services**

N-S STREET: Front St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: Ash St

DAY: THURSDAY

PROJECT# 10-4107-001

	NC	RTHBO	UND	SO	DUTHBO	UND	E	ASTBOU	ND	V	/ESTBOL	IND	
LANES:	NL 0	NT 0	NR 0	SL 0	ST 3	SR 0	EL 0	ET 0	ER 0	WL 1.5	WT 2.5	WR 0	TOTAL
7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM 9:00 AM 9:15 AM					248 285 264 289 264 255 218 197	66 99 77 81 75 69 68 67				100 101 120 135 129 109 90 78	317 362 341 362 339 290 222 201		731 847 802 867 807 723 598 543
TOTAL VOLUMES =	NL 0	NT 0 gins at:	NR 0 745	SL 0	ST 2020	SR 602	EL O	ET 0	ER 0	WL 862	WT 2434	WR 0	TOTAL 5918
		9	, 13										
PEAK VOLUMES = PEAK HR.	0	0	0	0	1102	332	0	0	0	485	1404	0	3323
FACTOR:		0.000	-		0.934			0.000			0.950		0.958

CONTROL:

Signalized



National Data & Surveying Services

#### Front St and Ash St, City of San Diego

				Peak	Hour Su	mmary							
[	Date:	3/25/2010	-	Sout	hbound Ap	proach				Project	#: <u>10-4</u>	107-001	
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			200										

### **Intersection Turning Movement**

## Prepared by:

National Data & Surveying Services

N-S STREET: 1st Ave

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: A St

DAY: THURSDAY

PROJECT# 10-4107-003

	Νſ	ORTHBO	IND	SC	UTHBOU	IND	F	ASTBOU	ND	W	ESTBOU	ND	
	110		5,45										
	NL	NT	NR	SL	ST	SR	EL	ΕT	ER	WL	WΤ	WR	TOTAL
LANES:	0	3	0	. 0	0	0	0	3	0	0	0	0	
7:30 AM		178	25				64	73			*****		340
7:45 AM		163	23				60	83					329
8:00 AM		179	37				76	68					360
8:15 AM		166	33				68	95					362
8:30 AM		180	30				77	71					358
8:45 AM		163	41				77	58					339
9:00 AM		160	34				82	99					375
9:15 AM		141	42				56	82					321
TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	0	1330	265	0	0	0	560	629	0	0	0	0	2784
	l												
AM Pea	ak Hr Be	egins at:	815	AM									
PEAK				_			_			_			
VOLUMES =	0	669	138	0	0	0	304	323	0	0	0	0	1434
PEAK HR.													
FACTOR:		0.961			0.000			0.866			0.000		0.956

CONTROL: Signalized



National Data & Surveying Services

#### 1st Ave and A St, City of San Diego

				Peak Hour Summary			
	Date:	3/25/2010		Southbound Approach		Project #: 16	0-4107-003
	Day:	Thursday		0 0 Q Lanes	N		
			9	0 0 AM		AM Peak Hour:	815 AM
			1st Ave			NOON Peak Hour:	
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				0 0 0 NOON		NOON	
						PM	
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r	Control:	Signalized		0 3 0 Lanes			
				Northbound Approach			

## **Intersection Turning Movement**

#### Prepared by: **National Data & Surveying Services**

N-S STREET: State St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: B St

DAY: THURSDAY

PROJECT# 10-4107-004

	NORTHBOUND		SOUTHBOUND		EASTBOUND			N					
LANES:	NL 0	NT 3	NR 0	SL 0	ST 0	SR 0	EL 0	ET 1	ER 0	WL 0	<b>WT</b> .5	WR ر5	TOTAL
7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM 9:00 AM 9:15 AM	17 12 6 6 10 12 14 4	26 32 29 21 28 20 25 22	8 5 10 12 9 10 7 8				15 22 18 18 17 17 18 12	7 9 11 7 8 7 11			34 35 39 42 37 34 29 36	24 35 45 43 48 39 36 22	131 150 158 149 157 139 140
TOTAL VOLUMES =  AM Pea	NL 81 ak Hr Be	NT 203 egins at:	NR 69 745	SL 0	ST 0	SR 0	EL 137	ET <i>7</i> 5	ER 0	WL 0	WT 286	WR 292	TOTAL 1143
PEAK VOLUMES = PEAK HR. FACTOR:	34	110 0.918	36	0.	0.000	0	75	35 0.887	0	0	153 0.953	171	0.972

CONTROL: 3-Way Stop (NB/EB/WB)



National Data & Surveying Services

#### State St and B St , City of San Diego

	Peak Hour Summary Southbound Approach  0 0 0 Lanes 0 0 0 AM 0 0 NOON 0 0 PM	Project #: 10-4  N  AM Peak Hour:  NOON Peak Hour:  PM Peak Hour:	107-004 745 AM
B St  Lanes AM NOON PM 9 0 75 0 0 0  Ensition of the control of th		AM NOON PM 1711 0 0 0 153 0 0	C G G G G G WET
Control: 3-Way Stop (NB/EB/WB)	34 110 36 AM  0 0 0 NOON  0 0 PM  0 3 0 Lanes  Northbound Approach	Count Periods Start:  AM 7:30 AM  NOON  PM	End: 9:30 AM

### **National Data & Surveying Services**

N-S STREET: Union St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: B St

DAY: THURSDAY

PROJECT# 10-4107-007

	NC	RTHBOL	JND	SC	UTHBOL	JND	E	ASTBOU	ND	W	ESTBOU	ND	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM 9:00 AM 9:15 AM	4 7 8 1 7 7 2 4	15 16 19 13 32 24 23 15	3 2 6 2 6 4 6 4	2 8 2 2 2 2 2 1 2	30 43 34 28 25 35 25 21	17 12 18 8 28 25 18 14	5 2 3 1 1 2 2	11 9 10 11 11 12 8 14	2 6 7 5 6 5 8 7	3 6 8 8 6 13 4 3	34 50 61 73 52 43 46 37	9 17 13 15 10 10 13	135 178 189 167 186 182 156 132
TOTAL VOLUMES =  AM Pea	NL 40 sk Hr Be	NT 157 egins at:	NR 33 800	SL 21 AM	ST 241	SR 140	EL 17	ET 86	ER 46	WL 51	WT 396	WR 97	TOTAL 1325
PEAK VOLUMES = PEAK HR. FACTOR:	23	88 0.717	18	8	122 0.843	79	7	44 0.925	23	35	229 0.813	48	724 0.958

CONTROL:

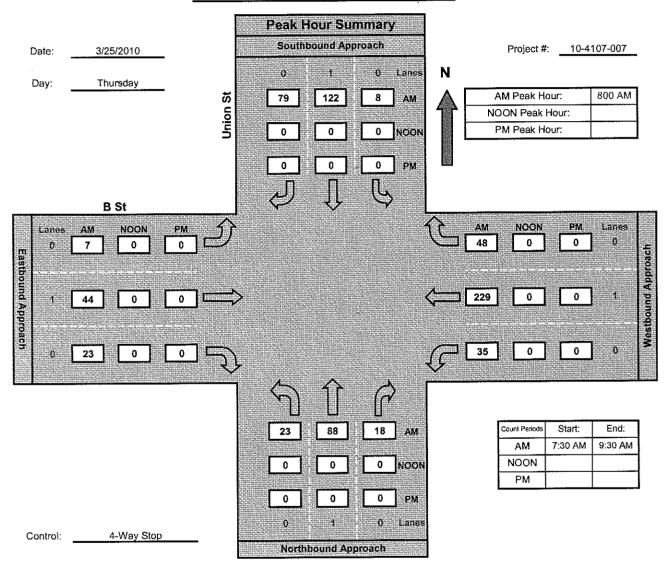
4-Way Stop

### **Intersection Turning Movement**



National Data & Surveying Services

#### Union St and B St, City of San Diego



### **National Data & Surveying Services**

N-S STREET: Front St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: B St

DAY: THURSDAY

PROJECT# 10-4107-010

	NC	RTHBO	JND	SC	оитнвоі	JND	E	ASTBOU	ND	W	ESTBOL	IND	
LANES:	NL O	NT 0	NR 0	SL 0	ST. 3	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM 9:00 AM 9:15 AM				10 8 13 9 11 7 8	230 257 313 332 325 270 241 264	38 56 62 74 52 57 55 37		17 10 12 9 10 12 8 12	3 10 5 5 9 6 6 7	7 6 7 9 6 10 5 13	6 15 21 20 17 11 8 10		311 362 433 458 430 373 331 352
TOTAL VOLUMES =	NL 0 ak Hr Be	NT 0 egins at:	NR 0 800	SL 75	ST 2232	SR 431	EL O	ET 90	ER 51	WL 63	WT 108	WR 0	TOTAL 3050
PEAK VOLUMES = PEAK HR. FACTOR:	0	0.000	0	40	1240 0.919	245	0	43 0.895	25	32	69 0.871	0	1694 0.925

CONTROL:

Signalized



National Data & Surveying Services

#### Front St and B St , City of San Diego

Date: 3/25/2010  Day: Thursday	Peak Hour Summary  Southbound Approach  0 3 0 Lanes  245 1240 40 AM  0 0 0 NOON		800 AM
B St			
Lanes AM NOON PM 0 0 0 0		AM NOON PM	Lanes 0 Approach
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		69 0 0 0 32 0 0	O C
Control: Signalized	O O O AM  O O O NOON  O O O PM  O O O Lanes  Northbound Approach	Count Periods Start: AM 7:30 AM NOON PM	End: 9:30 AM

### **National Data & Surveying Services**

N-S STREET: State St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: C St

DAY: THURSDAY

PROJECT# 10-4107-005

	NC	NTURAL	IMD	S.C.	NITURAL	IND		ASTBOU	VID.	10/	ESTBOL	IND	
	NC	RTHBO	טאט	30	UTHBOU	טאנ		AS I DOU!	ND	VV	LSTBOO	טאוט	
	NL.	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	0	0	0	0	2	0	0	0	0	
7:30 AM		69	3				12	3	11				87
7:45 AM		53	7				7	3					70
8:00 AM		54	0				7	8					69
8:15 AM		62	4				8	5					7 <del>9</del>
8:30 AM		43	4				9	10					66
8:45 AM		46	4				12	3					65
9:00 AM		<del>4</del> 5	0				14	1					60
9:15 AM		35	7				11	6					59
			,							1			
TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WΤ	WR	TOTAL
VOLUMES =	0	407	29	0	0	0	80	39	0	0	0	0	555
	l			I						l			l l
AM Pea	ık Hr Be	gins at:	730	AM									
PEAK													
VOLUMES =	<b>l</b> o	238	14	0	0	0	34	19	0	0	0	0	305
PEAK HR.													<b>!</b>
FACTOR:		0.875			0.000			0.883			0.000		0.876

CONTROL: 1-Way Stop (NB)



National Data & Surveying Services

#### State St and C St, City of San Diego

			Peak Hour Summary					
Date:	3/25/2010		Southbound Approach	M	Project #:	10-4	107-005	
Day:	Thursday		0 0 Canes	N _				Į
		55	O O AM	<u> </u>	AM Peak Ho		730 AM	
		State St		15	IOON Peak H			
		₹ .	0 0 0 NOON		PM Peak Ho	ur:		
•	C St							
		, Δ		AM AM	NOON	PM	Lanes	
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v		コフタ		Ų Ľ	ا ا	۳		
Control:	1-Way Stop (NB)		0 238 14 AM 0 0 0 0 NOON 0 0 0 PM 0 3 0 Lanes		Count Periods AM NOON PM	Start: 7:30 AM	End: 9:30 AM	

## **National Data & Surveying Services**

N-S STREET: Union St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: C St

CONTROL: 2-Way Stop (NB/SB)

DAY: THURSDAY

PROJECT# 10-4107-008

	NC	RTHBOL	JND	SC	UTHBOL	JND	E	ASTBOU	ND	W	ESTBOL	JND	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL .5	ET 1	ER .5	WL 0	WT 0	WR 0	TOTAL
7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM 9:00 AM 9:15 AM		26 29 40 39 43 37 28 26	7 6 12 12 7 9 11 6	1 4 1 6 2 4 0 3	35 47 41 44 24 44 32 19		0 0 1 0 1 0 1 3	4 5 2 6 7 5 0 6	1 5 2 3 5 1 0 3		7		74 96 99 110 89 100 72 66
TOTAL VOLUMES =	NL 0	NT 268	NR 70	SL 21	ST 286	SR 0	EL 6	ET 35	ER 20	WL 0	WT 0	WR 0	TOTAL 706
AM Pea	k Hr Be	gins at:	800	AM									
PEAK VOLUMES = PEAK HR. FACTOR:	0	159 0.957	40	13	153 0.830	0	2	20 0.635	11	· 0	0.000	0	398 0.905

# Intersection Turning Movement Nos



National Data & Surveying Services

#### Union St and C St , City of San Diego

Date: 3/25/2010  Day: Thursday	eak Hour Sum Southbound Appro  1 0 1 153 1 0 0 [ 0 0 [ ]	00 COMMON AMENANTA BLANCO CONTO CONTO	N A	Project # AM Peak H NOON Peak PM Peak H	our: Hour:	800 AM	
C St  Lames AM NOON PM  .5 2 0 0  .5 2 0 0  .5 2 0 0  .5 1 20 0 0  .5 11 0 0		· 1		NOON O O O	PM 0	Lanes 0 0	Westbound Approach
Control: 2-Way Stop (NB/SB)	0 159 [ 0 0 0 [ 0 0 1 Northbound Appro	40 AM  0 NOON  0 PM  0 Lanes		Count Periods AM NOON PM	Start: 7:30 AM	End: 9:30 AM	

### **National Data & Surveying Services**

N-S STREET: State St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: Broadway

DAY: THURSDAY

PROJECT# 10-4107-006

	NC	RTHBO	JND	SC	UTHBO	JND	E.	ASTBOU	ND	W	ESTBOL	IND	
LANES:	NL 0	NT 0	NR 0	SL 0	ST 0	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM 9:00 AM 9:15 AM		1			1 2200	-	13 16 17 18 13 12 12 14	63 51 60 67 80 70 71 74	8 11 6 7 10 11 11 4	6 16 10 10 12 19 13 9	101 129 107 134 129 120 101	85 94 71 95 45 59 34 33	276 317 271 331 289 291 242 234
TOTAL VOLUMES =	NL O k Hr Be	NT 0 gins at:	NR 0 745	SL 0 AM	ST 0	SR 0	EL 115	ET 536	ER 68	95	WT 921	WR 516	TOTAL 2251
PEAK VOLUMES = PEAK HR. FACTOR:	0	0.000	0	0	0.000	0	64	258 0.864	34	48	499 0.891	305	1208 0.912

CONTROL: Signalized



National Data & Surveying Services

#### State St and Broadway, City of San Diego

			Peak Hour Summary			
ı	Date:	3/25/2010	Southbound Approach		Project #:10-4	107-006
			0 0 0 Lanes	N	•	
	Day:	Thursday #	0 0 0 AM		AM Peak Hour:	745 AM
		State St			OON Peak Hour:	
		Sta	0 0 0 NOON	F	PM Peak Hour:	
			O O PM	janaja.		
		Broadway		^		
	Lanes	AM NOON PM		AM 305	NOON PM	Lanes _
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			$\mathcal{A}$			
					Count Periods Start:	End:
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			ng pasagan na mga n Mga na mga n		PM	
			0 0 PM			
_		Olemediand	0 0 0 Lanes			
C	Control:	Signalized	Northbound Approach			
				-		

### **Intersection Turning Movement**

### Prepared by:

### **National Data & Surveying Services**

N-S STREET: Union St

DATE: 03/25/2010

LOCATION: City of San Diego

E-W STREET: Broadway

CONTROL: Signalized

DAY: THURSDAY

PROJECT# 10-4107-009

	NC	ORTHBO	UND	SC	UTHBO	UND	E	ASTBOU	ND	N	/ESTBOL	JND	
LANES:	NL 0	NT 0	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:30 AM 7:45 AM			: - : : : : : : : : : : : : : : : : : :	7 15		26 32	4	60 40			167 196	32 41	296 328
8:00 AM 8:15 AM				8 15		27 33	3	70 58			169 205	50 60	327 375
8:30 AM 8:45 AM				9 10		16 33	2 4	75 73			169 165	44 46	315 331
9:00 AM 9:15 AM				10 9		19 19	0 2	70 73			124 127	35 28	258 <b>2</b> 58
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 83	ST 0	SR 205	EL 23	ET 519	ER 0	WL 0	WT 13 <b>2</b> 2	WR 336	TOTAL 2488
AM Pea	ak Hr Be	egins at:	800	АМ									
PEAK VOLUMES =	0	0	0	42	0	109	13	276	0	0	708	200	1348
PEAK HR. FACTOR:		0.000			0.786	:		0.938			0.857		0.899



National Data & Surveying Services

#### Union St and Broadway, City of San Diego

Date: 3/25/2010  Day: Thursday  あいらい	NC NC	Project #: 10-4*  AM Peak Hour:  DON Peak Hour:  PM Peak Hour:	107-009 800 AM
Broadway			
Lanes AM NOON PM  1 13 0 0  1 2 276 0 0	AM 200 200 708	NOON PM 0 0	Vastbound Approach
0 0 0 0		0 0	Assew T
Control: Signalized	0 0 0 AM  0 0 NOON  0 0 PM  0 0 Eanes	Count Periods Start: AM 7:30 AM NOON PM	End: 9:30 AM

Presumed he MUSIATO

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Prepared by NDS/400

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#### <u>APPENDIX B</u>

### **Existing Conditions HCM Worksheets**

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Level Of Service Computation Report  2000 HCM Operations Method (Base Volume Alternative)  ***********************************	Level 10 HCM Operat ************************************	Level Of Service Computation Report  100 HCM Operations Method (Base Volume Alternative)  ***********************************	Computa (Base *****	ttion R Volume	eport Alteri	native)	* * * * * * * * * * * * * * * * * * * *	) + + + + + + + + + + + + + + + + + + +	} **   **   **	2000 HCM ************************************	######################################	Level Of Operation *******	Level Of Service C Operations Method	Computation (Base	Computation Report (Base Volume Alternative)	TC T T T T T T T T T T T T T T T T T T			} +c  1 +c  1 +c  1 +c  1 +c  1 +c
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* -	**************************************	* 0	****** ound - R	* 10 : * 12 * 13 *	**************************************	****** Ash St nd R	* • 🗗	****** Bound T -	* - * pi	**************************************	***** North	********* Front Bound F . R	**************************************	******* ound - R	******* East	**************************************	יוד * בי א	**************************************	* * * * * * * * * * * * * * * * * * *
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Sat.:	1252	,	1	0	0	0 ::	9 4	1	206	Final Sat.:		1	0 3	- 1	0	!	0 1706	4940	0 :
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40	9.0 19.0 0.0 .16 0.16 0.00	0.00		0.0	0.00	0.00	91.0 91		91.0						0.0 0.0			54.8	0.0
en ⊢.	39.0	0.0	41.4 1.00	1.00	0.0	0.0		2.6 2 1.00 1.	1.00	Delay/Veh: User DelAdj:	0.0	1.00	0.0 19.9 1.00 1.00	19.9	-	0.0	0 20.0	20.0	0.0
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EX AM		Wed	Wed May 12,	, 2010	10:46:	:48			Page !	5-1	EX AM		Wed	Мау 12,	0 10	:46:48		3 1 1 1	Page 6	<b>→</b> 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1	Existing Condition AM Peak SD Courthouse	ng Conditi AM Peak Courthouse	tions	, 1 1 1	1 1 1 1 1	 	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	! ! !	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1	; ; ; ; ; ; ;	Existing ( AM I	ng Conditions AM Peak Courthouse	suc				
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Intersection #103 lst / A ***********************************	#103 lst /	******	******	***	* * * * * * * * * * * * * * * * * * * *	****	***	***	***	****	IDCORSCCION #104 B	/ G *0T# U	/ SCSCE **********	****	*******	**************************************	* * * * * * * * * * * * * * * * * * * *	****	* * * *	* * * * * * * * * * * * * * * * * * * *
Cycle (sec): 110 Critical Vol./Cap.(X): Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 34 Cap. (Service: Sec): 34 Cap. (Sec): 34 Cap.	110	.10 0 (Y+R= 34 ****	(Y+R=4.0 Bec)	Crit ) Aver Leve	Critical Vol./Cap.(X) Average Delay (sec/velevel Of Service:	/ol./Ca slay (e service	<pre>Critical Vol./Cap.(X): Average Delay (sec/veh) Level Of Service: ************************************</pre>	*****	0.337 17.2 B B	. 337 17.2 * B * * *	Cycle (sec): Loss Time (sec) Optimal Cycle: ************************************	: (	100 0 (Y+R=4.0 0 0 *******	* C * C * C * C * C * C * C * C * C * C	Critica Average Level (	<pre>Critical Vol./Cap.(X) Average Delay (sec/ve Level Of Service: ************************************</pre>	Vol./Cap.(X): Delay (sec/veh): Service: *********	: D): *****	7.65.0 6.6 7.4*****	******* A * ***
Street Name: Approach: Movement:	North Bound	1st S und	St. South	South Bound - T - R	1	East Bound	A Bound - R	ı	West Bo	Bound	Street Name Approach: Movement:	North L - T	State Bound	St. South Bound L - T -	ound - R	East L . T	Ď.	. 왕 	West Bound	nd R
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Volume Module: Base Vol:	0 669	138		C	0 304	323	00 1	00	, ,	000	Volume Modul Base Vol: Growth Adi:	le: 34 110 1.00 1.00	36	0 0 1	0 0 1	75 35	35 0	0 0 0 1.00	153	171
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Reduced Vol: PCE Adj:	1.00 1.00		1.00 1.0				Η,	д, 0.	1.00	1.00	PCE Adj:	1.00	≓.	0.1	00.1	000	0.6	0.4		1.00
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Adjustment:	1.00 0.89	0.89								1.00	Lanes:	0,57 1.83	0.60	10	0.0	0.68 0.32	0		0.47	0.53
neB: nal Sat.:	0	1684	90				,	•		0			13	ž I	,		; ; ;			-
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Crit Moves:		7 5 2								0	Delay/Veh: Delay Adi:	9.0 8.7	8.2	1.00 1.00	0.0	$\vdash$		0 0.0	9.8	9.8 1.00
Volume/Cap:		0.21	U	٥.			0	0	0	0.00	AdjDel/Veh:	o.e.		0		8.7 8	8.7 0.0 A		9 ¥	8. K
User DelAdj:		1.00	_				Н	-	$\vdash$	1.00	ApproachDel	:		XXXXXX			7.		9.8	
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HCM2kAvgq; 0 6 3 0 0 0 6 3 4 *********************************	9 0	* * * * * * * * * * * * * * * * * * *	0 ***	******	*****	***** *****	3 0	****	* * * * * * * * * * * * * * * * * * * *	* 0 * * * *	LOS by Appr   AllWayAvgO:	. 0.1	1 0.1	0.0 0.0	0.0	0.2	.2 O.	2 0.6	9.0	9.0
Note: Queue reported is the number of cars per lane.	reported is	the n:	umber of	cars p	er lar *****	ne. * * *	*	* * *	* * *	*****	************************************	*************************************	* CD * * CD * * CD * CD * CD * CD * CD	**************************************	**************************************	* *	* * * * * * * * * * * * * * * * * * * *	***********	* *	* * * * *
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вх ам	We	Wed May 12,	2010 10:	10:46:48		щ	Page 7-1	EX AM		Wed	May 12, 20	2010 10:4	6:48		φ, i	Page 8-1	1
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Existing AM AM SD Cour	sting Conditions AM Peak SD Courthouse	9ue	; ; ; ;		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1 1 7 6 6 1 1 1	, д.   	Existing Co	ng Conditions AM Peak Courthouse	. r	3		, , , , , , , , , , , , , , , , , , ,	;
Level Of Service Computation Report  2000 HCM 4-Way Stop Method (Base Volume Alternative)		Of Service Computation Report Stop Method (Base Volume Alternative)	Computal	Lion Repo	rt rernati. ******	:	,	1	2000 HCM **********	Level Of Se M Operations	Service Constitution Method	omputati (Base Vo	Computation Report (Base Volume Alternative)	rnative *****	*	***************************************	* *
Intersection #105 B / Union	3 / Union :*******	*****	***	*****	******	*	****		4 / G OOT# HO	T CTI C	**************************************	****	****	****	*****	***	* *
Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 0 Evvice:	100 0 (Y+R: 0	(Y+R=4.0 sec)	Critica Averaga Level (	<pre>Critical Vol./Cap.(X): Average Delay (sec/veh): Level Of Service:</pre>	ap.(X): sec/veh) e:	9 9 9	0.452 10.3	Cycle (sec): Loss Time (sec) Optimal Cycle:		110 0 (Y+R=4.0 30 ******	0 Bec)	Critical Vol., Average Delay Level Of Serv:		Cap.(X): (sec/veh): ce: ********	*	.*************************************	* *
Street Name: Approach: Movement: L -	Union St North Bound T R L	St. South Bound L - T	Sound R	East 1	East Bound	: B	Bound F - R		North	ront d R	South Bo	~	East Bo L - T		, н	Bound T -	_ _≃
Control: Sto Rights:	Stop Sign Include	Stop Sign Include	ign ude	Stop Sign Include	op Sign Include	Stc	Stop Sign Include	Control: Rights:	 Protected Include		Protected		Permitted Include	red tde	Per	Permitted Include	1 .
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	1 0				1 0	i u		Volume	Module:	,   	40 1240		1	25	32	60	- 0
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00.1	н -	1.00 1.00	н. -	1.00 1.00	0 1.00	1.00 0.00	1.00 1.00	PCE Adj:	1.00 1.00	1.00 1.00	1.00 1.00	00.1	1.00 1.00	1,00	1.00 1.	.00 .00	8.8.
ume: 24						37				0		265	0	27	10	1	0
1 [4			:		!			Saturat	딥	_	000		0001	. 00	1900	91 0061	. 006
Adjustment: 1.00 1.00 Lanes: 0.18 0.68	1,00 1.00 0.68 0.14	1.00 1.00 0.04 0.58	0.38	0.00 1.00	0 0.31	0.11	74 0		1.00	.00			00,	90.0	.92		00.
Sat.: 116	- !	27 407	- :	62 391	1 204	81	528 111	. Lanes:	0.00 0.00		0.08 2.44 132 4100	0.48 810	0.00 0.63 0 1141	664		0,68 U. 1195	00.0
city Analysis Sat: 0.21		0.31 0.31		0.12	2 0.12	0.45	0.45 0.45	Capacity	yais	· · · · · · · · · · · · · · · · · · ·		<u></u>	; (	1 (		1 C	
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m on '		8.6 8.6		9.6 8.6	9.8	11.4 F	11,4 11.4 B B	Nolume/Cap	0.00 0.00	0.00	0.39 0.39	2.2	0.00 0.25				0.0
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ı	1.00	1.00		1.00	0 '		1.00	AdjDel/Veh:	0.6				0.0 40.9	4	4	0 د ح	o. 4
ApprAdjDel: 108 bv Appr:	6.4	9.8 8.4	m	. 4 0	o. 4		77.4 B	HCM2kAvgQ:	۰°	٢°	4 50		3		1 4		0
AllWayAvgQ: 0.2	0.2 0.2	4.0 4.0	1 0 4	0 1	.1 0.1	7.0.4	* 0	** NOTE: 0:01:0 10:00:07	* ~ T	********* # + + + * * * * * * * * * * * * * * * *	* 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	*****	**************************************	***	***	* * * * * *	* * *
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化化妆品 医法氏试验检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检	*******	*****	* * * * * * *	***	* * * * * *		******	*									

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05/12/2010 10:46 Filename: EX-AM.OUT	Page 9	05/12/2010 10:46 Filename: EX-AM.OUT
EX AM Wed May 12, 2010 10:46:48	Page 9-1	EX AM Wed May 12, 2010 10:46:48 Page 10-1
Existing Conditions AM Peak SD Courthouse	                     	Existing Conditions AM Peak SD Courthouse
Level Of Service Computation Report  2000 HCM Unsignalized Method (Base Volume Alternative)  ***********************************	1	Intersection #108 C / Union
	**************************************	**************************************
**************************************	West Bound	C St. h Bound East Bound West Bo
Control: Stop Sign Stop Stgn Uncontrolled Unc Rights: Include Include	Uncontrolled Include	Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Rights: Include Include
Lanes: 0 0 2 1 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 1 Volume Module:	0 0 0 0	0 0 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
0 238 14 0 0 0 34 19 0 0 0 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00	Base Vol: 0 159 40 13 153 0 2 20 11 0 0 0 0 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
238 14 0 0 0 0 1 0 1 0 1 0 1 0 1 0 0 0 0 0	1.00 1.0 0.88 0.8	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 272 16 0 0 0 39 22 0 0 Reduct Vol: 0 0 0 0 0 0 0 0 0 PinalVolume: 0 272 16 0 0 0 39 22 0 0	000	707
	xxxx	6.2 7.1 6.5 xxxxx
TIM:XXXXX 4.0 3.3 XXXXX XXXX 2.2 XXXX XXXXX		4.0 3.3 3.5
Module:  Vol: xxxx 99 11 xxxx xxxx xxxxx 0 xxxx xxxxx xxxx	xx xxxx xx xxxx xx xxxx	xxxx 33 17 103 39 xxxxx 0 xxxx xxxx xxxx xxxx 864 1068 882 857 xxxxx 900 xxxx xxxx xxxx xxxx 862 1068 711 855 xxxxx 900 xxxx xxxx xxxx 0.20 0.04 0.02 0.20 xxxx 0.00 xxxx xxxx xxxx xxxx
Level Of Service Module:	×××××	
1. XXXXX 11.2 XXXXX XXXXX 9.2 XXXX XXXXX XXXXX 3. * * * * * * * * * * * * * * * * * *	XX *	1:XXXXX XXXXX XXXXX XXXXX 9.0 XXXX XXXXX XXXXX XXXXX E: * * * * * * * * * * * * * * * * * *
LTR - RT LT - LTR - RT LT - LTR - RT LT - XXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX	XXXX	Movement: LT - LTR - RT Shared cap.: xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxx
XXXXX XXXX 10.5 XXXXX XXXX XXXX 0.1 XXXX XXXXX XXXXX 1XXXX 10.2 XXXXX XXXX 9.2 XXXX XXXXX XXXXX	* * * * * * * * * * * * * * * * * * * *	XXXX 10.5 XXXX XXXX 9.0 XXXX XXXXX XXXXX XXXX * * * * * * * *
10.9 XXXXXX XXXXXX B + + + + + + + + + + + +	******	indel: 10.3 10.5 xxxxxxx and 10.5 xxxxxxx xxxxxxx and 10.3 B B
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Productions	EX AM		Wed May	12, 2010	10 10:46	16;48			Page	11-1	EX AM			Wed	1 May 12	, 2010	10:46:	:48		Ã	Page 12	,
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The class   110   The class   The	**************************************	2000 HCM Oper ************************************	1 Of Servations Mex************************************	vice Com ethod (E	nputati Base Vo	lon Reg blume /	port	tive)	. +	1 -k 1 -k 1 -k	**************************************	200 ****** tion #11	D HCM O:	evel 01 peratic *******	Servicons Meth	:	tation se Volu	 Report me Alte	rnative	*   *   *	;	, * ! * ! *
North Board   Secte 6:   South Board   East Board   Mayboach:   Land   Mayboach:   Land	**************************************	.*************************************	**************************************	********* Cr Sec) Av	ritical rerage wel Of	******   Vol./   Delay   Servi	****** /Cap.(X (sec/v ice:	:**** (): reh):	* · · · · · · · · · · · · · · · · · · ·	* * * * * * * * * * * * * * * * * * *	******* Cycle (s Loss Tim	******* ec): e (sec): Cycle:	******	****** 0 (Y+R: 4	**************************************	Cril	****** cical V rage De	****** ol./car lay (se ervice:	******; '. (x); c/veh);	* * * *	* G G G G G G G G G G G G G G G G G G G	* ហិល៤ * * *
Second Control   Projected	**************************************	**************************************	******** ate St. Sol	******* uth Bour - T -	)d **	*** I	****** E Bound T -	***** Troadwa   R L	****** V West B	****** ound - R	****** Street N Approach Movement	*	* द	****** Union und - R	St. South	****** 1 Bound T - T	* I	East Bo	***** Broad und - R	* * * * * * * * * * * * * * * * * * *	****** at Bour	* ** 54 **
Main Green:   7   10   10   0   0   0   1   10   10	Control: Rights:	Protected Include		rotected Include	<u> </u>	Per	rmitted aclude	<u> </u>	Permi	tted ude	Control:	; ; ;	Permit Inclu	ted	Per	mitted	<u></u>	Permit	ted	1 A	Permitted Include	
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#### **APPENDIX C**

**Existing Plus Project Conditions HCM Worksheets** 

Filename: EX P~1.OUT	Mon May 3, 2010 09:47:34 Page 2-1	Existing Plus Project AM Peak SD Courthouse Project	Trip Generation Report With Project / Less MB/FL Trips Forecast for am project	Rate Rate Trips Trips Total % Of Units In Out In Out Trips Total	34.00 Courthouse 0.84 0.16 29 5 34 11.8 180.00 MB/FL Reassign 0.90 0.10 162 18 180 62.7 bbtotal	100.00 Trip Distribut 0.00 0.00 0 0 0 0 0.0 34.00 Courthouse 0.84 0.16 29 5 34 11.8 181.00 MB/FL Reassign 0.90 0.10 163 18 181 63.1 btotal	-361.00 Madge Bradley 0.90 0.10 -325 -36 -361 -125.
05/03/2010 09:47 File	EX+P AM M		With	Zone Amount Un	1 Parking 1 34.00 Cc 1 Parking 1 180.00 ME Zone 1 Subtotal	2 Parking 2 100.00 Tr 2 Parking 2 34.00 Cc 2 Parking 2 181.00 ME Zone 2 Subtotal	361,00 Me
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05/03/2010 09:47	EX+P AM		Scenario:		Trip Distribution: Paths: Routes: Configuration:		

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TOTAL

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					#103 1st / A	B 17.2 0.337	B 17.6 0.346 + 0.408 D/V	+ 0.408 D/V
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#### APPENDIX D

# **Cumulative Conditions Growth Factor Calculation Worksheets**

SAN DIEGO COURTHOUSE Daily Traffic Volume Calculations

aily Traffi.	Daily Traffic Volume Calculations							Part and	dependence in the			Growth	Cite							change in	L	Net from	om Change	Je   Per Year	ar Growth
Vesidoena	Location	(# Lanes)	Capacity	AOT	ΛC	SOT	% trips	Trips	Ex+P	N.	SOT	to 2013	Volume	Ex+C	A/C	807	Ex+C+P	VIC	108	VIC	2030	Existing	-	ar Growth	h Factor
	, ii	₌ ا	92	11,660	75.0	. 60	10%	85.5	11,746	0.47		8	558	12,218	0.49		12,384	0.49	В	0000	1,200	5,340	0 267	246	59,1
	State Street to Union Street	Major one-way (3)	25,000	12.100	54.0	83	10%	85.5	12,186	0.49	В	2	531	12,631	0.51	82	12,716	0.51	а	0.00	1,300	4,900	245	*	1.04
	linion Street in Front Street	Major one-way (3)	25,000	13,474	35		73%	196.65	13,670	0.55	eù.	1.04	296	14,070	.0.56	o	14,267	0.57	u	10.0	19,000	5,527	7 276	*	1,04
3	neh Street Front Street to First Avenue	Malor one-way (3)	25,000	14,847	890	υ	15%	128,25	14,975	0,60	υ	20,1	줧	15,651	0.63	ņ	15,779	690	Ü	10.0	23000	8,153	3 408	×	1.05
	Columbia Street to State St.	Malor one-way (3)	25,000	8,740	0.35	4	2%	17.1	8,757	0.35	<b>4</b>	97	769	9,499	0.38	۷	9,516	98.0	4	0,00	<b>D</b> 0000	71,260	95	3%	8.
	State Street to Union Street*	Major one-way (3)	25,000	B, 422	0.34	٧	26%	222.3	8,644	0,35	٧	1.08	654	9,076	0,36	4	9,258	0.37	<	0,01	17,000	9,576	623	3%	9,
	Union Street to Front Street*	Major one-way (3)	25,000	11,462	0.46		23%	196.65	11,658	0.47	 .: <b>m</b> .	1.06	989	12,157	0.49	60	12,354	0.49	10	0:01	18,000	XO 7,536	377	5%	1.06
A Stront	Front Straet to First Avenue	Major one-way (3)	25,000	12,630	15.0	8	15%	12B.25	12,758	0.51	m	1.07	824	13,454	0.54	go	13,582	Ž	æ	10.0	22,000	9,370	469	2%	1.07
	Columbia Street to State St.	Local (2)	90.0	4,812	9'0	v	10%	85.5	4.898	0.61	Ü	8	418	5,230	0.65	۵	5,315	9970		0.0	7,000	6,188	306	3%	8.
	State Street to Union Street	Loca (2)	8,000	4,994	29.0	٥	22%	188.1	5,182	90		1,08	420	5,414	0.68	C	5,602	02'0	۵	0.02	2	900 8 000	900	3%	85
2	P. Street Linkon Street to Front Street	Local (2)	9,000	3,538	4	٥	15%	128.25	3,664	0.46	v	1,11	372	3908	0.49	υ	4,036	0.50	ن	0.02	W 1	7,464	33	3%	1,11
100	C Street Columbia Street to State St.	Local one-way (2)	8,000	5	0.14	٧	18%	153,9	1,254	0.16	۷.	1,12	ğ	1,234	0.15	٩	1,388	0.17	4	0,02	3,000	3,900	186	*	1.12
	Kettner flyd to India Street	Collector (4)	30,000	14,070	0,47	υ	4%	34.2	14,104	0.47	٥	1.08	1,151	15,221	0.51	O	15,255	0.5	v	00'0	00006	15,930	3D 797	%	1.08
	Union Street to Front Street	Collector (4)	30,000	16 130	35.0	٥	%9	51.3	16,181	0.54	U	1.07	1,098	17,228	0.57	υ	17,279	0.58	o	0.00	000 ez	12,870	70 644	5%	1.07
dway	Broadway Front Street to First Avenue	Collector (4)	30,000	20,754	0.69	٥	9%9	51,3	20,605	0.69	Δ.	1.06	1,177	21,931	0.73	D	21,982	0.73	۵	0.00	33,000	12,246	46 612	2%	90.
	Ash Street to A Street	Local one-way (3)	10,000	2,190	0.22	. A	23%	17.1	2,207	0.22	₹	1.10	215	2,405	0.24	¥	2,422	0.24	4	0.00	9	3,610	191	3%	1.10
	B Street to C Street	Local one-way (3)	10,000	3,800	0.38	*4	20%	427.5	4,228	0.42	in	1.01	g	3,629	0.38	₹	4.256	0.43	m	10.0	98	200	10	%	10,1
Street	C Street to Broadway	Local one-way (3)	10,000	322	0.32	⋖	%.	59.85	3,281	0.33	*	1,08	368	3,489	0.35	ď	3,549	9.35	∢	10:0	7	3,779	169	3%	1.08
Γ'	Ash Straet to A Street	Major one-way (3)	25,000	16,025	99,	ŷ	%8	69.4	16,093	8	o	3	576	16,601	0.66	o	16,670	690	٥	0.00	21.360	4.975	249	*	1.04
Front	A Street to B Street	Major one-way (3)	25,000	14,532	0,58	G	%B	68.4	14,600	0.58	o	9.	8	14,600	0.58	Ö	14,669	620	o	0,00	13.000	894	8	Š	8.
	Ash Street to A Street	Major pno-way (3)	25,000	19,860	97.0	c	15%	128,25	19.388	0.60	o	1.01	162	20,022	80	۵	20,150	16.0	q	10'0	Ž	1,140	65	%	10.
Sentie	1* Avenue A Street to B Street	Major one-way (3)	25,000	15,849	0.63	Ç	8%	68.4	15,917	0.64	υ	1.02	586	16,135	0.65	υ	16,203	0.65	۵	000	18,000	2,151	108	1%	1,02
	TRIP GENERATION #		New Trips	134 New Trips																					

Estimated Volume from SANDAG & Existing Count Data

#### APPENDIX E

## Cumulative Conditions HCM Worksheets

04/28/2010 11:12	Filename: EX C~1.OUT	Page 1	04/28/2010 11:12	Filename: EX C~1.OUT	ā
EX+C AM	Wed Apr 28, 2010 11:12:15	Page 1-1	EX+C AM	Wed Apr 28, 2010 11:12:15 Page 2-1	7
	Existing Plus Cumulative Conditions AM Peak SD Courthouse Project	; ; ; ; ; ; ; ;		Existing Plus Cumulative Conditions AM Peak SD Courthouse Project	1
Scenario:	EX+C AM			Trip Distribution Report Percent Of Trips project	
Command: Volume: Geometry:	cum-am cum-am ex		1 2	10 11	
Impact Fee: Trip Generation: Trin Distribution:	Default Impact Fee none		Zone 2	4.0 30.0 30.0 30.0 30.0 11.0 0.0 13.0	
Paths: Routes:	Default Path Default Route		5 4.0 4.0	0 4.0 30.0 30.0 30.0 30.0 11.0 0.0 13.0 4.0 4.0 30.0 0.0 30.0 0.0 11.0 0.0 13.0 4.0	
Configuration:	Cum-ลิกา		To Gates	s 20	
			Zone		

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Existing Plus Cumulative Conditions   Existing Plus Cumulative Cumulative Cumulative Cumulative Cumulative Cumulative   Existing Plus Cumulative Cumu	04/28/2010 11:12	Filename: EX C"1,OUT	C~1.OUT		Page 3	04/28/2010 11:12	Filename: EX C~1.OUT	C~1.OUT		Page 4
Existing Plus Cumulative Conditions   AM Peak   SD Courthbouse Project   SD Courthbouse Alternative   SD Cou	E	Wed Apr 2	18, 2010 11:12:15		Page 3-1	EX+C AM	Wed Apr 26	, 2010 11:12:15	; ; ; ; ; ;	Page 4-1
Intersection Volume Report  Base Volume Alternative  Northbound Southbound Eastbound Westbound  Northbound Southbound Bastbound Northbound Southbound Sout	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Existing Plus	Cumulative Conditi AM Peak thouse Project	\$10.			Existing Plus C	umulative Condition M Peak house Project	to.	
Northbound Southbound Bastbound Mestbound Node Intersection L T R L T	; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	Intersecti Base Vol	on Volume Report				Intersection Future Vol	n Volume Report		
16 36 0 0 106 345 0 0 0 215 1502 73 101 Ash / Union 16 36 0 0 1046 345 0 0 0 215 1502 73 101 Ash / Front 0 0 0 1146 345 0 0 0 504 1460 0 102 Ash / Front 0 0 0 1146 345 0 0 0 504 1460 0 103 1st / A 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 0 1146 345 0 0 0 0 0 1146 345 0 0 0 0 0 1146 345 0 0 0 0 0 1146 345 0 0 0 0 0 1146 345 0 0 0 0 0 1146 345 0 0 0 0 0 1146 345 0 0 0 0 0 1146 345 0 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 1146 345 0 0 0 0 0 146 345 0 0 0 0 146 345 0 0 0 0 146 345 0 0 0 0 146 345 0 0 0 0 0 146 345 0 0 0 0 0 146 345 0 0 0 0 0 0 146 345 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Intersection	Northbound L T R			Westbound L T R	Node Intersection	Northbound L T R		stbound - T R	Westbound L T R
0 702 145 0 0 0 319 339 0 0 0 0 165 185	Ash / Union Ash / Front		345	000	15 1502 73 04 1460 0	101 Ash / Union 102 Ash / Front		106 30 1146 345	000	215 1502 73 504 1460 0
23 88 18 8 12 79 7 44 23 35 229 48 105 B / Union 23 88 18 8 122 79 7 44 23 35 229 6 0 0 0 0 40 1240 245 0 43 25 32 69 0 106 B / Front 0 0 0 40 1240 245 0 43 25 32 69 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	lst / A B / State	702 119	00	8 8 8 8 8 8		103 lst / A 104 B / State	119	00		
0 0 0 40 1240 245 0 43 25 32 69 0 106 B / Front 0 0 0 40 1240 245 0 43 25 32 69 0 0 255 15 0 0 0 36 20 0 0 0 0 107 C / State 0 255 15 0 0 0 36 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	B / Union	88	122	23	229	105 B / Union	88	122		
255 15 0 0 38 20 0 0 108 C Union 0 175 15 16 0 2 21 12 0 0 1 108 C Union 0 170 43 14 164 0 2 21 12 0 0 0 1 108 11 108 0 0 0 69 279 37 52 539 329 109 Broadway / St 108 11 108 0 0 0 69 279 37 52 539 11 11 758 214 110 Broadway / Un 107 107 27 45 107 117 14 295 11 11 758 11 11 758	B / Front		1240 245	43 25		106 B / Front		1240 245		32 69 0
: 108 11 108 0 0 0 69 279 37 52 539 329   109 Broadway / St 108 11 108 0 0 0 69 279 37 52 539 1 10 Broadway / Un 107 107 27 45 107 117 14 295 11 11 758 214   110 Broadway / Un 107 107 27 45 107 117 14 295 11 11 759	c / State c / Union		164 0	2 10	00	ט ט		164 0		00
BIOGUNAZY / UII 107 27 42 107 117 12 233 12 12 12 20 214 110 BIOGUNAZY / UII 107 107 27 42 107 117 12 233 12 12 12 12 12 12 12 12 12 12 12 12 12	Broadway / St	1 5	0 0	37	539	Broadway /	117	0 0 0		539
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EX+C AM	Wed Apr 28, 2010 11:12:15	Page 5-1	EX+C AM Wed Apr 28, 2010 11:12:15	Page 6-1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Existing Plus Cumulative Conditions AM Peak SD Courthouse Project	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Existing Plus Cumulative Conditions AM Peak SD Courthouse Project	S
; 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	Impact Analysis Report Level Of Service	1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1; 1	2000 HCM Operations Method (Base Volume Alternative) ************************************	t ernative) ************************************
Intersection	Base Future Del/ V/ Del/ V/	Change / in	Intersection #101 Ash / Union ***********************************	. (X):
#101 Ash / Union		1 + 0.000 D/V	ec): 0 (Y+R=4.0 sec)	
#102 Ash / Front	C 20.4 0.620 C 20.4 0.620	0 + 0.000 D/V	**************************************	***************************************
#103 1st / A	B 17,3 0.354 B 17,3 0.354	4 + 0.000 D/V	South Bound	g,
#104 B / State	A 9.6 0.433 A 9.6 0.433	3 + 0.000 V/C	Parmitted Permitted	t i
#105 B / Union	B 10.3 0.452 B 10.3 0.452	2 + 0.000 V/C	Include Include	
#106 B / Front	A 6.2 0.409 A 6.2 0.409	V/d 000.0 + 6	Min. Green: 7 10 0 0 10 10 0	0 0 1 10 10 0 0
#107 C / State	B 11.1 0.000 B 11.1 0.000	V/G 000.0 + 0		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
#108 C / Union	B 10.6 0,000 B 10.6 0.000	V/d 0000.0 + 0	15 35 0 0 102 29	0 0.1
#109 Broadway / State	e B 11,6 0,429 B 11,6 0,429	V/d 0000.0 + 6	: 100 1 00 1 00 1 00 1 00 1 00	0 215 1502 1.00 1.00 1.00
#110 Broadway / Union	nn B 15,8 0,515 B 15,8 0,515	N/G 000.0 + S	0.99 0.99 0.99 16 37 0	0.99 0.99

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Critical Vol./C sec) Average Delay ( Level Of Servic ************************************	Y+R=4.
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EX+C AM	×	Wed Apr 28, 20	2010 11;	:12:15			Page	7-1	EX+C AM		Wed	d Apr 28	, 2010	11;12;1	G		Pa	age 8-1	; ;
1 1 2 5 5 5 5 7 8 8	Exist.	Existing Plus Cumulative Conditions AM Peak SD Courthouse Project	lative ak	Condit	ions	; ; ; ;	I I I I	) 		1	Existing	Plus	Cumulative AM Peak thouse Proj	re Cond	Conditions				; ;
* * +     * *	Level Of Service Computation Report  2000 HCM Operations Method (Base Volume Alternative)  ***********************************	Of Service Computation Report tions Method (Base Volume Alte	omputat (Base V	ion Re Jolume	port Altern *****	ative)	. *   *   *   *   *   *   *   *   *   *	1	2000	* # # # # # # # # # # # # # # # # # # #	Level O Operati ******	Level Of Service Computation Report  HCM Operations Method (Base Volume Alternative)  ***********************************	Service Computation Report s Method (Base Volume Alte	cation Volum	Report e Alter *****	native *****	! * ! * ! *	* ! * !	1 * 1 * 1 * 1 * 1 * 1 * 1 * 1 * 1
***********			****	*****	* * * * *	****	*****	*******	* * * * * * * * * * * * * * * * * * * *	- 14	* * * * * * * * * * * * * * * * * * * *	******	****	*****	*****	***	*****	********	* * *
Cycle (sec): Loss Time (sec): Optimal Cycle:	11 11	O (Y+R=4.0 Sec) A O	Vritica Nverage Level O	Critical Vol./Cap.(X) Average Delay (sec/ve- Level Of Service:	/Cap.(X): (sec/veh)	K): veh):	,	0.620 20.4 C	Cycle (sec): Loss Time (sec): Optimal Cycle:	**		<pre>(Y+R=4.0 sec) Average Delay (sec/ve Level Of Service:</pre>	Critic Averaç Level	Critical Vol./ Average Delay Level Of Servi	Vol./Cap.(X) Selay (sec/ve Service:	Cap.(X): (sec/veh): .ce:	*	0.354 17.3 *******	* * *
Street Name: Approach: Movement:	Front North Bound L T T R	t St. South Bound L T -	bri R	Eas L	East Bound	Ash St.	. B	Sound - R	Street Name Approach: Movement:	, Lt	lst ound - R	St. South	South Bound	™ 	East Bound	A St nd R	± 22 '	Bound T	- e
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initiai Bse; User Adj:	1.00	1.00		.00.		-	50		User Adj:	1.001		00.				00.		00	1.00
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User DelAdj:	1.00	1.00			-		1 00	П	User DelAdj	1.00 1.0	1.00								1.00
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**************************************	**************************************	number of car	cars per lane	lane.	* *	* * *	* *	*	Note: Queue ********	**************************************	B the number	umber of ******	# * * * * * * * * * * * * * * * * * * *	per lane.		****	* * *	* * * *	*

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×	<u></u>	Wed Apr 28, 2010	11:12:15		Бвд	re 9-1	EX+C AM		Wed	Apr 28,	2010 11	:12:15			Page 10	-1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Exist:	Existing Plus Cumulative AM Peak SD Courthouse Proj	Condit	lons		1 1 1 1 1 1	1 1 5 5 1 1 5 5 1 5 5 1 5 5 5 5 5 5 5 5	[2] 	xisting E		'lus Cumulative Co. AM Peak Courthouse Projec	Condition	1 6 10 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 3 2 3 7 1	1 1 1 1 1 1	 
1	Level 2000 HCM 4-Way ************************************	Level Service Computation Report  2000 HCM 4-Way Stop Method (Base Volume Alternative)	utation Rep se Volume A ******	) ort \lernativ	**************************************	j	1	2000 HCM 4	evel of Way St ******	Servide Computation Report Op Method (Base Volume Alte	Computation Reference (Base Volume	ation Repor Volume Alt	! F! *	ative) *****	*   *   *   *   *	1 + 1 + 1 + 1 + 1 + 1 + 1 + 1
Intersection #104 B	#104 B / State	Intersection #104 B / State	***************************************	***************************************	***	****		#105 B /	Union	***	* * * * * *	***************************************	*	*****	***	* * *
Cycle (sec): Loss Time (sec) Optimal Cycle:	100 (Y-	Crit (Y+R=4.0 sec) Ave: Leve	Critical Vol./Cap.(X): Average Delay (sec/veh) Level Of Service:	Cap.(X): (sec/veh)		0.433 9.6 A	Cycle (sec): Loss Time (sec) Optimal Cycle:	: (c)	0 0 (Y+R=4 0	ซิ	Critica Average Level (	Critical Vol./Cap.(X) Average Delay (sec/ve Level Of Service:	(Cap.(X): (sec/veh)	. (d	0.452 10.3 B	
**************************************	**************************************	************ St. South Bound	* * * * * * * * * * * * * * * * * * *	East Bound	* *	**************************************	**************************************	**** rth - H	**************************************	* 4	******* Bound	+ 0i + 1)	* O	* * *	* Ö	
Control: Rights:	Stop Sign Include	Stop Sign Include	Stop	op Sign Include	Stop	op Sign Include	Control: Rights:	Stop Sign Include		Stop Sig Includ	Sign	Stop	Stop Sign Include	, (Q	Stop Sign Include	
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J: Se:	1.08 1 119	1,08 1.08 0 0	1.08	_	1.08		Growth Adj:   Initial Bse:	23 8		00 1.00 8 122	1.00	ri 1	.00 1.00 44 23	35 35	1.00	1.00 1.00
	1.00 1. 0.97 0.	1.00 1.0 0.97 0.9	1.00	0 1.0 7 0.9	1.00 1.00 0.97 0.97	00 1.00 97 0.97	User Adj: PHF Adj:	1.00 1.00 0.96 0.96	00.1			- 0	40		0.96	0.96 0.96
PHF Volume: Reduct Vol:	38 122 40 0 0 0	00	00	39			PHF Volume: Reduct Vol:	σ	o o			<b>~</b> 0	ဖုဝ		239	0 0
Reduced Vol: PCE Adi:	38 122 40 1.00 1.00 1.00	0 0 1.00	1.00	39 0 1,00 1.00	1.00 1		Reduced Vol:	24 92 1.00 1.00	1,00	<b>ه</b> ۵		0 1	-		1,00	1.00
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Sat.:	4 1140	0	481	•	0		Final Sat.:	116			:	62	1	* <u> </u>	. :	1111
Capacity Analysis	Module: 0.1	xx xxxx xxxx	0.17	0.17 xxxx	0 xxxx	3 0,	ity An	ysis Mo	e: 0.21	0.31 0.31	0.3	0.12 0.	.12 0.12	2 0.45		0.45
Crit Moves:		0	* 0		* -	-	Crit Moves:	ď	σ	* 0	6	*			11.4	11.4
Delay/Ven: Delay Adj:	Н	1.00 1.00	1.00	П	1.00		Delay Adj:				` <del></del>	-	1	7	1.00	1.00
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Note: Queue :	eported is the	Note: Queue reported is the number of dars per lane.	**************************************	****	*	* * *	Note: Queue	reported is	the ****	* be * *	γi *	lane. ******	* * * * *	* * * *	* * * * *	* * * *

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	EXISTING COLORS		Plus Cumulative Con AM Peak Courthouse Project	Plus Cumulative Conditions AM Peak D Courthouse Project	! ! !	T T E E E E E E E E E E E E E E E E E E	\$ ; ; ;	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	EXI	Existing Pl	Plus Cumulative Con AM Peak D Courthouse Project	ive Conditions Project	tions	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
**************************************	` Σ* ~	Level Of Service Computation Report Operations Method (Base Volume Alte ************************************	Computat (Base V	ion Report Olume Alte	rnative		1 + 1 + 1 + 1 + 1 + 1 + 1 + 1	Level Of Service Computation Report  2000 HCM Unsignalized Method (Base Volume Alternative)  ***********************************	Ideal of Service Computation Report  2000 HCM Unsignalized Method (Base Volume Alternative)  ***********************************	el Of Se gnalized ******	Service Computation Report ed Method (Base Volume Alt ************************************	utation R ase Volum	eport e Alternati	.ve)	*   *   *   *
*********	***************************************	· * * * * * * * * * * * * * * * * * * *	****	****	****	* * * * *	***	***************************************	*******	* * * * * * * * * * * * * * * * * * * *	******	*****	******	*****	****
Cycle (sec): Loss Time (sec):	110	(Y+R=4.0 sec)	Critica Average	Critical Vol./Cap.(X): Average Delay (sec/veh)	o.(X): c/veh):	0.409	on rot	Average Delay (sec/veh): 10.2 MorsE Case Level UI Service: B! II.1]	**********	***********	MOM*******	WOLEC CASE LEVEL	evel OI Ser	OI SGIVIGE: U.	TT.TT *
Optimal Cycle:	Optimal Cycle: 31	*****	Level 0	Level Of Service:	***	***	**** *	Street Name:	St North Bound	ate St	Զշուքի Bonnd	E.	C S Rast Bound	St. West	West Bound
Street Name: Approach:	Fro North Bound	Front St. Ind South Bound	puno	East Bound	B St.	West	nd	Movement:	- L	R L.		"	H	4	, ;
Movement:	T T T	저 그 1	H	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ے : : : ہے	- I - I	PK 1	Control:   Rights:	Stop Sign Include		Stop Sign Include	Ono	Uncontrolled Include	ni Th	Uncontrolled Include
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	1.05	1.05	1.05	.05		.05 1.05	1.05	Reduct Vol:	0 0	0 !	0 0	0 0	0 (	00	0 0
	0.93 0.93 0.93	93 0,93 0,93	0.93	0.93 0.93	. 60.0	0.93 0.93 36 78	56.0	Final Volume:	167 0		j l	=	ŋ !	 	, ,
PHF VOLUME: Reduct Vol:		n 0			0 0		> 0	Critical Gap 1	Gap Module:	_		=			
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PCE Adj:	1.00	1.00		_	1.00	,00 1.00	1.00	× -	4.0	3.3 xxxxx	x xxxx xxxxx	=	XXXX XXXX	ž	XXXX XXXX
MLF Adj:	1.00	1.00	-	0.1		1.00	1.00			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	, , , , , , , , ,		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-	1 1 1 1 1
FinalVolume:	0 1	0 45 1408 	27.8	64 0	87	36 78	- - - !	Capacity Module:	106	12 xxxx	XXXX XXXX	×	XXXX XXXX	xxxx	XXXX XXXX
atu	ow Module:		=		=		-	Potent Cap.:	788		XXXX				
Sat/Lane:		1900	1900	900	006	1900	1900		750	1075 xxxx	хххх		×		~
ment:	1.00 1	0.88	0.88	1.00 0.95	26.0	0.92 0.92	1.00	Volume/Cap:		.02 xxxx	X XXXX XXXX	xx 0.05	XXXX XXXX	XXXXX	XXXX XXXX
Lanes: Bingles:	0.0000000	.00 0.08 2.44	ο α	0.00 0.63			00.0	- Y - S	ice Module:	_		- -		_	
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Vol/Sat:	0.00 0.00 00.0	.00 0.34 0.34	0.34	0.00 0.04	0.04	0.07 0.07	00.0	LOS by Move:		* L'I	TITR	¥ 1.	I.TR - RT	I - II	LTR - RT
Crit Moves: Green Time:	0 0 0	0.0 92.4 92.4	92.4	0.0 17.6	17.6	17.6 17.6	0.0	Shared Cap.: xxxx	XXXX	10	XXXX	xxxx	XXXX X		Я
/Cap:	0.00	0.41	0.41		0.27	.41 0.41	00.0	SharedQueue:xxxxx	XXXX		XXXX				
	0.0	2.2	2.2			2.5 42.5	0.0	Shrd ConDel:xxxxx	XXXX	10.4 xxxxx	Ž	σ	XXXX XXXX	XXXXX	XXXX XXXX
User DelAdj:	1,00	1.00.1	1.00	1.00 1.00	1.00	.00 1.00	1.00	Shared LOS:	* <del>-</del>	* 11	* * * * * * * * * * * * * * * * * * * *	4	>	*****	. }
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EX+C AM		Wed A	Apr 28, 20	2010 11:12:15	12:15		Page	Je 13-1	EX+C AM		Wed	Apr 28,	2010 11;	:12:15		Pa	Page 14-3	
1 1 1 1 1 2 3 3 5 7 7 7 8 1 1 1	Exi	isting P		lative ( ak le Proje	Condition	; ; ; ; ; ; ;	, 1 1 1 1 1 1	} ; ; ; ; ; ;			Existing		lus Cumulative Con AM Peak Courthouse Project	dition	, , ,			
Level Of Service Computation Report  2000 HCW Unsignalized Method (Base Volume Alternative	2000 HCM Unsignalized Method (Base Volume Albernative	rel Of S gnalize	Level Of Service Computation Report nsignalized Method (Base Volume Alt. ************************************	mputat:	ion Repor Volume Al	 t ternati ******		1		2000 HCM Operations Method (Base Volume Alternative)	Level Of Operation	Service ns Method	Computat (Base V	Level Of Service Computation Report Operations Method (Base Volume Alternative)	crnative	*   *   *   *   *	: ** : ** : ** : ** : ** : ** : ** : **	! * ! * ! *
Intersection #108 C / Union	#108 C / Uni	lon ******	*****	***	******	***************************************	****	*****		Intersection #109 Broadway	~ *	State *****	*****	*****************	****	*	*****	* * *
Average Delay (secven); 9.7 Worst Case Level Of Servin************************************	r (sec/veh):	* 0 *	* * * * * * * * * * * * * * * * * * * *	forst Ca	Worst Case Level Of Service: B[ ***********************************	* Of Ser	**********	10.6]			110 0 (Y+R=4.0	4.0 sec)	Critical Vol., Average Delay	Critical Vol./Cap.(X) Average Delay (sec/ve	Cap.(X): (sec/veh)		0.429	
Street Name:	UU Puice 4+xoM	Union St	Courth Bound	Ţ	Fact House	C St.	τ. Μρα†	Bound	Optimal Cycle:	*****	33	*******	Level	Level Of Service:	******	*****************	E ****	*
Movement:		" [ "	Strong Sign	<u> </u>	L T P R				Street Name; Approach; Movement:	North L - T	State Bound	St. South Bound L - T -	ound - R	B East Bound L - T	Broadway bund		West Bound - T -	ng ≃
Rights:					Include	ude	Ä ,	Include	Control:	Protected	cted	Protected		Permitted	tted.		Permitted Trainda	. 70
Lanes:		0 0	0 0 1 0		0 7 10	0 1 1 1 1	0		Kights:	2017	Tuctude	THE	ם חח	TICT	ט ב	4	10.1	
Volume Module Base Vol:	e: 0 159	04.0	13 153	- 00	20 1 20 1 20	11		00 1	Min. Green: Lanes:	0 0	10 10	0 0 0	000	1 0 1	0 0 1	0 1	10 1	010
Growen Adj: Initial Bse:	10.1 10.	i	164				-		Volume Modul	- o					-			-
User Adj: PHF Adi:	1.00.1.00.1 0.19.0 Te.0	1 00 1	1.00 1.00	1,00	1.00 1.00	1.00	1.00.1	00.1.00.	Base Vol:   Growth Adi:	100	100	0 0 1.08 1.08	Н	64 258 1.08 1.08	34 1.08	1.08 1		305 1.08
PHF Volume:	1881				81				Initial B	108	108	T						329
Reduct Vol: FinalVolume:	0 198	0 4	0 0 15 181	00	2 24	13	00	00	User Adj: PHF Adj:	-0	0.91	1.00 1.00 0.91 0.91	9.0	1.00 1.00 0.91 0.91	0.91			0.91
	W. A		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- - 1 1 1 1	 		1 1 1		PHF Volume	118 1	2 118	00	0 0	76 306		57	591	361
Critical Gp:xxxxx 6	rð.			XXXXX	4.1 XXXX XXXXX XX	XXXXX	XXX	XXXX XXXX	Reduced Vol	118								361
FollowUpTim:xxxxx	4.0	e.e	3.5 4.0 x	4.0 xxxxx	2.2 xxxx	xx xxxx :	XXX	XXXX XXXX	PCE Adj:	1.00 1.00	00.1.00	1.00 1.00		1.00 1.00	1.00	1.00.1	1.00.1	1.00 1.00
Capacity Module:	1	_	; :	_		-			FinalVolume	1118		1	0		•			361
Coffict Vol: xxxx	35	18 1	111 41 x 872 855 x	41 xxxxx	XXXX 0	0 XXXX XXXXX	XXX	XXXX XXXXX	Saturation	n Flow Module		; ; ; ; ; ; ;	1 1 1 1 1	; ; ; ; ; ; ;		! ! !	] 	I I
Move Cap.:	859		852		900 XXXX XXXXX	XXXXX		×	Sat/Lane:	1900	1900	ч,	1900				19001	900
Volume/Cap:	Cap: xxxx 0.22 0	0 04 0	02 0.21		0.00 xxxx	. xxxx	XXXX	XXXX XXXX	Adjustment Lanes:	T: 0.88 0.88	0.68	0.00 0.00		1.00 1.77	0			0.76
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LOS by Move:	* # #	* E	* = + = +	* E	A + Time	* E			Vol/Sat:	0.15 0.1	5 0.15	0.00 0.00	00.00	0.17 0.10	0.10	0.06 0	* 28	0.28
Shared Cap.: xxxx xxxx	•	_	XXXX		XXXX XXXX XXXXX	XXXXX			Green Time:	38.3	38.3				71.7			71.7
SharedQueue:xxxxx xxxx			0.9 XXXX XXXXX	XXXXX	0.0 xxxx xxxxx xxxxx o	XXXXXX	XXXXXX	XXXX XXXXX	Volume/Cap:	p: 0.43 0.43	0.43	0.00 0.00	00.0	0.25 0.15 8.5 7.4		0.09	9.43	0.43 9.4
Shared LOS:			* * * * *	*	* A	*	*		User Deladj	1.00	1.00	Н	1.00	Н	1,00			1.00
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Note: Queue reported is the number of cars per lane.	reported is t .*********	the numb	oer of cal	78 Der	lane. ******	*****	*	******		жикикикичичичичичичичичичичичичичичичичи	********		**************************************	**************************************	* * * *	* * * * *	* * *	)  -  c  c  c
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Level Of Service Computation Report 2000 HCM Operations Method (Base Volume Alternative) ************************************	2000 F 2000 F 4110 E	Leve HCM Opera ************************************	Level Of Se Operations	Of Servions Me	Service C Service C ns Method	Computation Report (Base Volume Alte	tion R Volume	Report	port Alternative)	(e) **	*	· * ·
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Min. Green: Lanes:	, 0	10 0	10	, 0	10	0 0 0	1 ,	10	10. 0 1	, t	010	10 10
Volume Module Base Vol:		100	_ K	4.2	100	109	- 13	276	10	10	708	200
	1.07	1.07	1.07	1.07	Н	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Initial Bse: User Adi:		107	1.00	1.00		117	14	295	11.00	11		214
PHF Adj:	0.90	06.0	. o.	0.90	0.90	06.0	0.90	0.90	0.90	0.90		0.90
PHF Volume:		911	90	000		130	13 13	328	2 2	12	843 0	238
Reduced Vol:		119	30	50		130	15	328	12	12	843	238
		00.1	1.00	1.00	Н -	1.00	00.1	1.00	1.00	1.00	1.00	1.00
F Adj: nalvolume	1119	113			119	130	15	328	5 H	122	843	238
aturation Fl	low Module	jule:	1 1 1	1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		<u> </u>	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		<u> </u>	i 	 
at/Lane:	1900	1900	1900	1900	Н	1900	1900	П	1900	1900	90	1900
Adjustment:	0.69	69.0	69.0	0.86	0.86	0.86	0.18	ο,	0.95	0.51	9.0	0.92
Sat.:			44	274	653	7.7	348		12.5	960	72	769
Capacity Anal	увів			:	!	!	<u> </u>	!	1	<u> </u>	1	!
Vol/Sat: Crit Moves:		****	0.21	0.18	0.18	0.18	0.04	0.09	0.09	0.01	0.37 ***	0.31
Green Time:		6.64	43.9	43.9		43.9	66.1	9	66.1	66.1	66.1	1.99
Volume/Cap: Delav/Veh:	25.9 2	0.51	0.51	24.8	24.8	24.8	0.07 9.3	9.7	9.7	0.02	12.9	12.9
User Deladj:		1,00	1.00	1.00		1.00	1.00	г	1,00	1.00	1.00	1.00
AdjDel/Veh:		25.9	25.9	24.8		24.8	9.3		7.6	eo o	12.9	12.9
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04/28/2010 11:18	EX+C+P AM	EX		Zone	# Subzone		1 Parking 1	1 Parking 1	Zone 1	2 Parking 2		2 Parking 2 Zone 2
Page 1	Page 1-1											
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C+P AM		Wed Ap	Apr 28,	2010	11:17:5	59		-	Page 5-	F.	EX+C+P AM		Wed	d Apr 28	3, 2010	11:17:	9.	3 3 - 1	Δ, i	Page 6-	1
E H I I I I I I I	Existing Plus	10	Cumulative Plus Proj SD Courthouse Study AM Peak Period	mlative Plus P Courthouse St AM Peak Period	Pro		Conditions	 	! ! ! !	t 1 1	; ; 1 1 1 1 1 1 1	Existing	Plus	Cumulative Plus SD Courthouse ? AM Peak Perio	umulative Plus P SD Courthouse St AM Peak Period	Proj Study od	ect Cond	Conditions			
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EX+C+P AM	35	Wed Apr 28, 2010 11:17	1:17:59	Page 7-1	EX+C+P AM	We	Wed Apr 28, 2010 1	11:17:59		Page	8-1
	Existing Plus	Existing Plus Cumulative Plus Project Conditions SD Courthouse Study AM Peak Period	Project Conditions Study		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Existing Plus	Cumulative Plus P SD Courthouse St AM Peak Period	Project Condition Study	ions	1 1 1 1 1 1	t t t 1
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e Modu Vol:		11 3 0 0 0 0 3 1.05 1.05	304 323 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Volume Module Base Vol: Growth Adi:	3: 34 110 36 1.08 1.08 1.08	1.08 1.08 1.08	75 35	1.08	0 153 .08 1.08	171
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PasserByvol: Initial Fut:	705	00	0 279	00	PasserByVol: Initial Fut:	0 129	00		00	0 0	185
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04/28/2010 11:18	Filename: EX C P~1.OUT	Page 9	04/28/2010 11:18	11:18	Filename: EX C P'1.OUT	Page 10
EX+C+P AM	EX+C+P AM Wed Apr 28, 2010 11:17:59	Page 8-2	EX+C+P AM	1 1	Wed Apr 28, 2010 11:17:59	Page 9*1
EXÍ	Existing Plus Cumulative Plus Project Conditions SD Courthouse Study AM Peak Period			Existin	Existing Plus Cumulative Plus Project Conditions SD Courthouse Study AM Peak Period	
mene report	Note: Queue reported is the number of cars per lane.	1 ***  1 ***  1 ***  1 ***  1 ***  1 ***  1 ***		L 2000 HCM 4-	Level Of Service Computation Report 2000 HCM 4-Way Stop Method (Future Volume Alternative)	

	on #105 B /	4-Way St. ******* Union	op Metho ******	d (Future ******	Volu *****	A1E ***	ernat ****	ive) ******	* *	* *
**************************************	* * * (Du	+X) 0	* 0	**** Criti Avera Level	* * * * Del	* > 5	(X): (veb)	* * * *	* * * * * * * * * * * * * * * * * * *	* ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ±
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User Adj:			1.00 1.00	0,0	1.00 96	7.00 96	00.1			- - - - - -
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Reduced Vol:	1 1	н	8 135	σ		ß	n	37	300	
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Adjustment:	.00 1.	ij	00 1.	0 1.0	1.0	0	1.00	0	۰,۱	1,00
Lanes: Final Sat.:	0.14 0.75 85 459		.03 23	58 0.39 73 252	0.0 80.0 80.0	356	50.0		530	-i &
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me: EX C P"1.0UT Page 12	Wed Apr 28, 2010 11:17:59 Page 10-1	Plus Cumulative Plus Project Conditions SD Courthouse Study AM Peak Period	Level Of Service Computation Report   Level Of Service Computation Report   Level Of Service Computation Report   Level Of Service   Level Of Se	1900 1900 1900 1900 1900 1900 1900 1900
11:18 Filename:	Wed	Existing Plus O	2000 HCM Operations Method ************************************	1900 1900 1900 1.00 1.00 1.00 0.00 0.00
04/28/2010 11	EX+C+P AM	1 1 1 1 1 2 3 3 3 4 1 7 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2000 HCP  ***********************************	
Page 11	Page 9-2	suo		
Filename: EX C P"1.OUT	Wed Apr 28, 20	ng Plus Cumulative Plus Pr SD Courthouse Stu AM Peak Period	Note: Queue reported is the number of cars per lane. ************************************	
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Capacity Analysis Module:

Vol/Sat:

Capacity Analysis Module:

Vol/Sat:

Capacity Analysis Module:

Vol/Sat:

Correction Correction

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Note: Queue reported is the number of cars per lane.

04/28/2010 11:19 Filename: EX C P~1.OUT	EX+C+P AM Wed Apr 28, 2010 11:17:59	Existing Plus Cumulative Plus Project Conditions SD Courthouse Study
Page 13	Page 11-1	oject Conditions dy
11:19 Filename: EX C P~1.OUT	Wed Apr 28, 2010 11:17:59	Existing Plus Cumulative Plus Project Conditions SD Courthouse Study
11:18		Exis

04/28/2010

EX+C+P AM

Page 12-1

2000 HCM Unsignalized Method (Future Volume Alternative) L T - R Uncontrolled North Bound South Bound East Bound Uncontrolled Level Of Service Computation Report AM Peak Period Stop Sign Intersection #107 C / State Stop Sign Movement; Control: Rights:

0 0 0 0.88 0 4.1 XXXX XXXXX XXXXX XXXXX 2,2 xxxx xxxxx xxxxx xxxx xxxx 0 0 0 1.07 1.00 0.00 0.88 0.88 1.00 0 0 34 19 36 20 36 20 136 20 0 0 172 20 1.00 1.00 1.00 23 197 23 0 1 1 1.00 0.00 0.888 6.2 XXXXX XXXX XXXXX 3.3 XXXXX XXXX 0 0 1.00 .00 .00 .000 .000 0 0 2 1 0 0 311 1.00 1.00 0.88 0.88 0 355 0 0 Critical Gp:xxxxx 6.5 FollowUpTim:xxxxx 4.0 Critical Gap Module: Growth Adj: 1.07 1 000 0 Volume Module: Base Vol: Initial Bse: PHF Adj: PHF Volume: Reduct Vol: PasserByVol: Initial Fut: FinalVolume: Added Vol: User Adj: Lanes:

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Note: Queue reported is the number of cars per lane.

XXXXX ш

XXXXXX

ApproachDel:

ApproachLOS:

2Way95thQ: xxxx 3.3 xxxxx xxxx xxxx xxxx xxxx Control Del:xxxxx 26.5 xxxxx xxxxx xxxx xxxx LOS by Move: \* D \* \* \* \* \* \*

\* D LT - LTR

Level Of Service Module:

XXXX XXXX XXXXX XXXX XXXX XXXX XXXX

12 1069 1069

Cnflict Vol: xxxx 417 Potent Cap.: xxxx 527

Capacity Module:

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Volume/Cap:

Move Cap.:

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900 xxxx xxxxx 0.22 xxxx xxxx

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10.1 XXXX 855		1 00	XXXXX					XXXXX
e/Cap: xxxx 0.27	0		XXXX	00				XXXX
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rol Del:xxxxx xx	XXXXX	×	XXXXX	XX O	XXX	×	×	XXXXX
LOS by Move: * * Moveour In - Inb - p	* E	* E	* E	* H.I.	* E	× E	, G.F.	* E
D.: XXXX XXXX	928	XXXX	XXXXX	×	×	×		XXXXX
: xxxx xxxx	.3 1.0		XXXXX	0		XXXXX X		XXXXX
Shrd ConDel:xxxxx xxxx 10	9.9 10.8 F	xxxx	xxxx	9.0 xxxx A *	* *	XXXXX X	хххх *	XXXXX
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EX+C+P AM		Wed Apr 2	28, 2010	11:17:5	159	1	Pag	e 13-1 	EX+C+P AM	       	 	Wed	Apr 28,	2010 11	.:17:59	 	1	Page 1	14-1
	Existing Plus	S GS	Cumulative Plus P SD Courthouse St AM Peak Period	Proj.		Conditions				Exi	cisting	Plus Ct	Cumulative Plu SD Courthouse AM Peak Per	Flus ouse S Perio	roject udy	Condition	<b>8</b> U		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Levelland Of Service Computation Report 2000 HCM Operations Method (Future Volume Alternative	level CService Computation Report Operations Method (Future Volume Alt. ************************************	ice Comp nod (Fut	ure Vo.	Computation Report Future Volume Alternative	:ernativ	(G) ***	; * * ; * * ; * * ; * * ; * * ; * * ; * * ; *	**************************************	2000	Le HCM Ope	Level Of Operations	Service s Method ******	Computa (Future	Computation Report (Future Volume Alt	! H * • O *	native)	* * * * * * * * * * * * * * * * * * * *	*
Intersection	Intersection #109 Broadway / State	/ State	* * * * *	, , ,	, , ,	, , ,	) )	) ) ) )	Intersection		#110 Broadway	\ *	Union	+	***********	***	*	***************************************	*
Cycle (sec):	110		Cri	Critical Vol.,	Critical Vol./Cap.(X)	/Cap. (x):			Cycle (sec):						Critical Vol./	Vol./Cap.(X):		0.57	57.8
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Street Name: Approach: Movement:	Sta North Bound L - T - R	State St. nd Sout R L -	South Bound	l R L	East Bo	Broadway Bound R L	y West	Bound	Street Name Approach: Movement:		й Н Т		outh	ound . R	East L - t	תחס	έ γ κ	est B	g,
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Adjust/ven: LOS by Move:	, , , , , , , , , , , , , , , , , , ,				A A	A.			LOS by Move					4	•	1	. m	щ	1
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**************************************	**************************************	the number o	of cars	cars per lane	* *			t t t t	Nobe: Queue	<b>*</b>	reserves red is	he :	ber of	cars per	. –	, ; ; ;	: : :	t t t t	
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Filename: EX C P~1.OUT

04/28/2010 11:18

EX+C+P AM	_	Wed #	Wed Apr 28,	, 2010		11:17:59	0			Page	e 15-	1
Existing	ing Plus		ulati Cour AM Pe	Cumulative Plus Project SD Courthouse Study AM Peak Period	ue Proj e Study riod	ojeci dy	•	Conditions	: 81 : 81 :	 	 	1 1 1
		Pro	Project	Trips Report project	Repo	1						! ; ! ;
Node Intersection	Nor	Northbound	H H	Sou	Southbound	ind R	E 13	Eastbound	덜	We.	Westbound	nd R
Zone #1: Parking 1	c	-	c	c	α	c	_	c	•		c	c
Ash /	10	10	0	0	0	57	0	0	0	4	57	0
1st /	0	0	0	0	0	0	7	7	0	0	0	0
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Zone #2: Parking 2												
Ash /	0	۳í	0	0	ø	0	0	0	0	0	58	0
102 Ash / Front	0	0	0	0	59	29	0	0	0	29	53	0
lst	0	ო	ო	0	0	0	ო	ო	0	0	0	0
_	1	10	12	0	0	0	0	0	0	0	65	0
105 B / Union	0	0	0	0	N	œ	0	7	Q	0	28	0
Д	0	0	0	0	0	(7) (3)	0	<b>r</b> ~	0	0	0	0
V.	0	26	0	0	0	0	136	0	0	0	0	0
C / Union	0	0	0	0	7	0	0	0	0	0	0	0
109 Broadway / St 110 Broadway / Un	25	00	00	0 m	o m	0 0	<b>0</b> 0	00	00	00	21	8. 0
Zone #5:												
	0	0	0	0	S	0	0	0	0	- 5	0	7
Ash /	0	0	0	0	-38	0	0	0	0	- 2	- 2	0
lat /	0	0	-19	0	0	0	0	-70	0	0	0	0
	0	0	0	0	0	O	0	0	0	0	0	0
105 B / Union		-17	0	0	2,	0	0	0	0	0	0	0
		0	0	0	-2	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0
c / Union		-17	0	0	2	0	0	0	0	0	0	0
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110 Broadway / Un		-17	0	0	12	0	0	i,	0	0	7	0

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